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ABSTRACT

Information from the 1978 Comparative Performance Study and investment questionnaire conducted by the National Association of College and University Business Officers is presented. One hundred forty-four institutions provided information about 164 investment pools. The Comparative Performance Study provides participating institutions with comparative performance data on their endowment pools. The investment questionnaire provides additional pertinent information relating to endowment funds and their management. All performance figures and other related figures have been computed with annual data supplied by each institution. The theory behind the methodology for the investment pool comparative performance computations and an explanation of performance calculations are presented in appendices. The confidential nature of participant responses to investment performance questions has been maintained through use of code numbers; however, select nonperformance data have been identified by institution in the belief that this information is most useful when so identified. Data are included on: performance by investment objectives; performance by size; equity-only performance; internal investment management performance; shifts in investments; distribution of asset composition; asset diversification; equity price earnings ratio; noncontrollable assets; risk measurement and return; stock and bond turnover; and investment advisory fees and discretion. (SW)

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Results of the 1978 NACUBO Comparative Performance Study and Investment Questionnaire

The NACUBO Investment Committee wishes to convey their thanks to the many who made this study possible. These include the business officers who voluntarily supplied data and answered the questionnaire, Bruce Dresner who voluntarily served so capably as survey coordinator, Dartmouth College for the use of its computer, and the organizations which provided financial support for this year's study.

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RESULTS OF THE 1978 NACUBO

COMPARATIVE PERFORMANCE STUDY

AND

INVESTMENT QUESTIONNAIRE

by

Bruce M. Dresner

Survey Coordinator

Under the Direction of
the NACUBO Investment Committee

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PREFACE

The annual NACUBO Comparative Performance Study was begun in 1971--as an expansion of a survey conducted in prior years by Dartmouth College--to provide participating institutions with comparative performance data on their endowment pools. Although originally the study gathered information only on performance, the study now includes an investment questionnaire which provides additional pertinent information relating to endowment funds and their management.

Throughout the study all performance figures and other related figures have been computed with annual data supplied by each institution. The theory behind the methodology for the investment pool comparative performance computations is described in Appendix I. Performance calculations are explained in detail in Appendix II. Similar information received from investment services or produced internally may vary from results in this report if such figures are based on other than annual data or computed in a different manner. While it is felt the results can be viewed with considerable validity, a very deviant response or an exceptional outcome should be treated with caution.

The confidential nature of participant responses to investment performance questions has been maintained through use of code numbers. However, select non-performance data have been identified by institution in the belief that this information is most useful when so identified.

The 1978 NACUBO study is provided in two sections. Section I contains comparative performance information and related investment performance statistics. Section II contains other endowment statistics.

Inquiries pertaining to the content of this report or to the methodology for the endowment pool comparative performance computations should be addressed to Bruce M. Dresner, NACUBO Survey Coordinator, P. O. Box 31, Hanover, New Hampshire 03755, (603) 646-2445. Additional copies of this report are available through the NACUBO office at $15 per copy for members, $50 for non-members. (Orders must be prepaid.) A Summary Comparative Performance Study is available at $4 per copy, minimum order five copies.

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RESULTS OF THE NACUBO 1978 COMPARATIVE PERFORMANCE STUDY AND INVESTMENT QUESTIONNAIRE

SECTION I -- INVESTMENT PERFORMANCE

INTRODUCTION

Participants

One hundred forty-four institutions provided information as of June 30, 1978, about 164 investment pools for the Comparative Performance Study (CPS). These institutions have endowment funds* totaling ten and one-half billion dollars at market value, or more than one-half of the total endowment wealth of all colleges and universities in the United States ($16,316,302,000), according to the most recent HEGIS survey (1977). Categorized by size, the reporting institutions in the NACUBO survey are classified as follows:

Table 1

Participating Institutions

Endowment Size	Number Reporting	Total Endowment
$100 million and over	25	$7,477,000,000
$50 to $100 million	22	1,560,000,000
$10 to $50 million	61	1,356,000,000
Under $10 million	36	189,000,000
TOTAL	144	$10,582,000,000

A detailed list of participating institutions, ranked by order of endowment size (including life income funds) is provided as Table 3, page 4, of this report. As a further helpful reference, an alphabetical listing of institutions participating in the CPS is also provided as Exhibit I, page 63.

*Endowment funds as reported by participating institutions might include more than just true, quasi-, or term endowment. Other funds retained in the endowment and similar funds group might be included also, such as life income funds, loan funds, and temporarily invested plant funds.

A list of the 164 participating investment pools by code name is provided in Exhibit II, page 65. Also provided in Exhibit II as of June 30, 1978, are each pool's characteristics, composition, investment objective, asset holdings by major investment classifications, number of different equity and bond holdings, and a 1978 bond and equity turnover percent measure. Given the amount of detail reported, Exhibit II and other exhibits are purposely placed in the back of the report as a reference source, while summary tables are presented herein.

Investment Objectives

Of the 164 investment pools, 54 (33 percent) follow a total return investment philosophy, 101 (62 percent) follow a balanced investment philosophy, and 9 (5 percent) follow an income-oriented philosophy. For performance comparison purposes the latter 2 groups have been combined. Four pools (2 percent) changed their investment objective during the year. Two of these changed from total return to balanced while 2 changed from balanced to income-oriented. For the past 3 years 9 changed from total return to balanced, 3 from balanced to income-oriented, and 2 from income-oriented to balanced. No institutions have changed to total return.

Size of Investment Pools

For performance comparison purposes the investment pools have been categorized by size as follows:

Table 2

Investment Pools by Size

Size of Pools	Number	Approximate Value of Pools
Over $50 million	39	$7,726,000,000
$10 to $50 million	66	1,592,000,000
Under $10 million	59	247,000,000
	164	$9,565,000,000

From 1974 to 1978 the size of the investment pools participating in the Comparative Performance Study has increased. In 1974, 47 percent of the pools in the study were under $10 million, while in 1978 only 36 percent were in that category. Correspondingly, the $10 to $50 million group increased from 30 percent to 40 percent, and the over $50 million group increased from 23 percent to 24 percent.

Pool Characteristics

In terms of characteristics, 127 (77 percent) of the pools were described as official pooled endowment funds. Eleven were described as combinations of more than one separately invested unitized fund; 11 as pools consisting of only those assets over which management has discretion; 9 as separately invested funds which have been unitized to enable performance to be accurately measured; and 6 as official pooled life income funds.

Pool Composition

All but 20 of the 164 pools were composed of true or quasi-endowment funds. Of the remaining 136, 121 pools contained both types, 19 contained only true endowment funds, and 4 contained only quasi-endowment funds. The 20 other pools included not only endowment funds but also investments of other fund groups.

Validity of CPS Data

Because NACUBO is dealing with a wealth of data, errors in compiling results may occur. Numerous checks have been incorporated over the years to keep such inconsistencies to a minimum. However, if the data supplied NACUBO (unit value and income per unit figures) are erroneous, the probability is that only very deviant figures will be spotted. Except for obvious erroneous and deviant figures, all data provided are treated as correct. Although each institution is responsible for the accuracy of data, it is felt that a high degree of reliability can be placed on the raw data supplied. This assumption is based on the fact that over 80 percent of participating pools are official pooled funds of the institutions, and the data provided for these pools are assumed to be consistent with those included in the financial statements of the institution.

Table 3

Total Endowment and Life Income Fund Assets
Ranked by Market Value at 6-30-78
(000 Omitted)

	Institution	Endowment	Life Income	Total	
1	Harvard University	1392640	0	1392640	
2	Stanford University	516234	74386	590620	(A)
3	Yale University	545200	3600	548800	
4	Columbia University	478000	4500	482500	
5	Princeton University	423347	3069	426416	
6	University of California	360021	2845	362866	
7	Massachusetts Institute of Technology	329703	5966	335669	
8	University of Rochester	304963	3166	308129	
9	University of Chicago	282800	11500	294300	
10	Cornell University	265479	15338	280817	
11	New York University	261442	1355	262797	(A)
12	Northwestern University	241345	11453	252798	
13	Rice University	235341	12840	248181	
14	Washington University	226594	3952	230546	
15	California Institute of Technology	154579	22937	177516	
16	University of Pennsylvania	153287	6745	160032	
17	Johns Hopkins University	152300	6900	159200	
18	Dartmouth College	146257	12334	158591	
19	Wellesley College	126546	8947	134593	
20	University of Delaware	120510	96	120606	
21	University of Notre Dame	115971	3044	119015	
22	Carnegie-Mellon University	109200	1939	111139	
23	Case Western Reserve University	102411	8676	111087	
24	University of Virginia	104210	131	104341	
25	Wesleyan University	103567	514	104081	
26	University of Michigan	92785	6075	98860	
27	Brown University	93217	4258	97475	
28	University of Minnesota	89417	187	89604	
29	University of Pittsburgh	86702	322	87024	
30	Smith College	82839	2696	85535	
31	Rensselaer Polytechnic Institute	81847	3468	85315	
32	Oberlin College	79870	3542	83412	
33	Vassar College	72783	8745	81528	
34	Williams College	76202	1861	78063	
35	Amherst College	73370	1870	72540	
36	Berea College	71700	2254	73954	
37	Swarthmore College	65252	2683	67935	
38	Ohio State University	62224	1174	63398	
39	University of Richmond	61678	140	61816	
40	Brandeis University	53309	3698	57007	
41	Lehigh University	52155	4849	57004	
42	Syracuse University	47042	8509	55551	
43	Rochester Institute of Technology	53733	0	53733	
44	State University of New York at Buffalo	53620	83	53703	

Table -- Continued

	Institution	Endowment	Life Income	Total	
45	Mount Holyoke College	47851	3539	51390	
46	Lafayette College	49924	1331	51255	
47	Wake Forest University	50155	522	50677	
48	Carleton College	45018	2454	47472	
49	Middlebury College	39975	1576	41551	
50	Georgetown University	37725	1690	39415	
51	Colgate University	34483	4495	38978	(M)
52	University of Miami	35102	3439	38541	(M)
53	Agnes Scott College	38386	109	38495	
54	Bowdoin College	38430	0	38430	
55	Bryn Mawr College	37739	655	38394	
56	Trinity College	36637	842	37479	
57	Cooper Union	34660	113	34773	
58	Boston University	32532	1343	33875	
59	Tufts University	30922	695	31617	
60	University of Wisconsin System	31523	0	31523	
61	Hampton Institute	29397	0	29397	
62	Whitman College	24710	4258	28968	
63	Bucknell University	28027	708	28735	
64	Willamette University	26490	1069	27559	
65	Rutgers, The State University	27456	6	27462	
66	Academy of the New Church	27140	0	27140	
67	Occidental College	21903	5112	27015	
68	Colby College	24843	1045	25888	
69	Colorado College	25496	293	25789	
70	Macalester College	21621	2917	24538	(A)
71	University of Tennessee	14888	9249	24137	
72	Baylor College of Medicine	23604	0	23604	
73	Drew University	23493	25	23518	
74	Teachers College - Columbia University	22672	156	22828	(A)
75	Barnard College	20518	464	20982	
76	University of Illinois	20241	175	20416	
77	Denison University	15568	2408	17976	
78	Dickinson College	16000	1567	17567	
79	College of Wooster	16664	824	17488	
80	University of Vermont	17152	220	17372	
81	Ohio Wesleyan University	15639	1700	17339	
82	Hendrix College	16386	829	17215	(J)
83	Albion College	15955	1132	17087	
84	Sweet Briar College	16937	81	17018	
85	University of Santa Clara	13560	3369	16929	
86	Simmons College	16730	0	16730	
87	University of Missouri	14735	1658	16393	
88	University of Alabama	16103	0	16103	
89	George Washington University	15316	0	15316	
90	University of Maryland	15104	0	15104	
91	Marquette University	14200	293	14493	
92	University of Nevada System	13791	392	14183	
93	Rhode Island School of Design	13961	0	13961	
94	Clark University	13053	606	13659	

Table -- Continued

	Institution	Endowment	Life Income	Total
95	Pennsylvania State University	11910	1597	13507
96	Indiana University	11923	1313	13236
97	Michigan State University	12705	345	13050
98	Cornell College	12546	164	12710
99	Franklin and Marshall College	12159	407	12566
100	University of Puget Sound	10828	1183	12011 (A)
101	Wheaton College	11419	142	11561
102	Spelman College	11377	0	11377
103	Baldwin-Wallace College	10645	598	11243
104	Reed College	10056	1072	11128
105	Oregon State Board of Higher Education	11119	0	11119
106	Alma College	10830	169	10999
107	Drake University	10702	159	10861 (M)
108	Washburn College	10451	0	10451
109	Mercer University	9600	342	9942
110	University of Maine	9645	0	9645
111	Coe College	9366	67	9433
112	University of Arizona	9207	0	9207
113	Kenyon College	8062	608	8670
114	Muhlenberg College	7797	42	7839
115	Hobart and William Smith Colleges	7633	118	7751
116	St. Norbert College	7688	0	7688
117	University of Dayton	7526	0	7526
118	Whittier College	6871	560	7431
119	Wayne State University	6552	21	6573 (S)
120	Babson College	6119	225	6344
121	Oregon State University Foundation	3090	2964	6054
122	University of Evansville	5866	75	5941
123	Carroll College	5654	255	5909
124	Hope College	3989	1628	5617
125	University of Nebraska	5273	0	5273
126	Alfred University	5125	2	5127
127	Otterbein College	4905	187	5092
128	Doane College	4430	559	4989
129	Virginia Military Institute	4915	0	4915
130	Medical College of Pennsylvania	4475	209	4684
131	American University	4617	0	4617
132	University of Arkansas	4364	216	4580
133	University of Akron	4148	20	4168
134	Washington State University	4001	0	4001
135	Philadelphia College of Textiles and Science	3395	0	3395
136	Arizona State University	2928	383	3173
137	University of North Carolina	3173	0	3173
138	University of Oregon Development Fund	2701	0	2701

Table -- Continued

139	University of Connecticut	1514	0	1514
140	Oakland University	1487	0	1487
141	University of Mississippi	1431	0	1431
142	East Michigan University	1350	39	1389
143	Monmouth College	1277	0	1277
144	State University of New York at Binghamton	591	0	591

NOTE: (A) Figures are as of August 31, 1978
(J) Figures are as of July 31, 1978
(M) Figures are as of May 31, 1978
(S) Figures are as of September 30, 1978

Summary - How Did Endowment Funds Do in 1977-78?

The purpose of the NACUBO Comparative Performance Study is to aid administrators in evaluating their investment pool's investment performance. It is felt that measuring comparative performance among pools with similar characteristics, objectives, and risk levels can add an important, useful dimension in reviewing and understanding the investment results achieved in respect to meeting desired goals. To provide a more definitive understanding of how an institution might interpret its investment pool performance, the performance for the average investment pool is analyzed in Table 4 for the one-, three-, five-, and ten-year periods ending June 30, 1978.

Table 4

Average Performance by Period

	Period Ended June 30, 1978			
	One Year	Three Years	Five Years	Ten Years
All Endowment Pools Measured	2.49%	5.90%	3.40%	3.78%
By Investment Objective:				
Total Return Pools	2.90	5.15	2.92	3.41
Balanced or Income Pools	2.29	6.26	3.65	3.99
By Size:				
Over $50 million	3.11	6.19	3.51	3.76
$10 to $50 million	2.73	5.99	3.15	3.70
Under $10 million	1.81	5.59	3.62	4.00
Comparative Indices:				
Dow-Jones Industrial Average	-5.81	2.23	2.82	3.24
S&P 500 Index	- .16	4.51	2.38	3.31
Salomon Brothers Bond Index	- .97	7.72	5.78	N/A
Kuhn Loeb Bond Index	.33	9.07	6.57	N/A

While one year is too short a time period to draw any significant conclusions regarding performance, for the year ending June 30, 1978, 162 of 164 pools in the CPS outperformed the Dow-Jones Industrial Average. This widely followed benchmark, which had a total return for the period of -5.81 percent, is not a good measure to use when comparing the performance of the average endowment pool which had a total return of 2.49 percent. A better measure, but still not completely representative for comparative purposes, is the S&P 500 Index which had a return of -.16 percent. The fact that 135 pools (82 percent) of the 164 pools outperformed the S&P 500 is very good news but is not surprising for 1977-78 which was a down period for stocks, since most endowment pools maintain a balanced investment mix and are not totally invested in stocks. For those few pools totally invested in either common stocks or long-term bonds, a direct comparison to the S&P 500 Index or Salomon Brothers Bond Index, respectively, is more valid. (A discussion of "equity only" and "bond only" performance comparisons to their respective appropriate indices is

found on pages 15-18). The fact that 143 pools (87 percent) outperformed the Salomon Brothers Bond Index is probably more significant for 1977-78, but should not be the sole measure of comparison in the evaluation of investment pool performance. It is impressive, however, that more than 80 percent of the pools outperformed both the S&P and Salomon indices. Table 5 is a summary of the number of investment pools which outperformed the popular indices for the four time periods ending June 30, 1978.

Table 5

Endowment Pools Which Outperformed the Popular Indices

Period Ended June 30, 1978	Dow-Jones Industrial Average	S&P 500 Index	Salomon Brothers Bond Index
One Year			
Number of Pools Measured	164	164	164
Number Outperforming Index	162	135	143
Percent	99%	82%	87%
Three Years			
Number of Pools Measured	158	158	158
Number Outperforming Index	141	112	38
Percent	89%	71%	24%
Five Years			
Number of Pools Measured	148	148	148
Number Outperforming Index	87	95	24
Percent	59%	64%	15%
Ten Years			
Number of Pools Measured	94	94	N/A
Number Outperforming Index	58	54	N/A
Percent	62%	57%	N/A

Some may consider the above summary as incomplete in that it does not take into account important considerations concerning a specific investment pool, such as the pool's objective (which might be quite different from that of either the stock or bond indices), its risk posture (which in most instances is intentionally below that of the stock market, but above the bond market in general), and other policy constraints which have been placed on the pool. In order to provide insight into what are typical effects of such policy constraints, the Comparative Performance Study report has endeavored to assemble an extensive amount of data relating to investment performance.

The 1976 CPS marked the first time NACUBO attempted to evaluate investment pool performance on a "risk adjusted basis." It was observed that in fiscal 1976 the average investment pool performed very much in line with what might be expected. This same conclusion applied for the year ending June 30, 1977. For fiscal 1978 it again is important to understand that performance conclusions are based on a risk adjusted basis taking into account the proportion of stocks, bonds, and other assets, and not on gross returns* (as shown in Table 4, Page 8). On this basis, the results for the one-year period ending June 30, 1978, were better than might be expected. It appears significant value has been added to endowment performance by investment management.

The results of prior surveys and of the 1978 survey indicate that managers of investment pools tend to take significantly less risk and correspondingly should expect significantly less return in a period of a rising stock market. Conversely, in a period of a falling market investment pools should outperform the market. Viewed in this context it is estimated that investment pools are only 70 percent as volatile as the market as shown in Table 6. The subjects of beta and risk adjusted returns are discussed in detail on page 29 under the title "Risk Measurement and Return."

Table 6

Comparative Performance Study
Historic Beta of All Endowment Pools

10 Years Ending	10 Year Beta
1975	.69
1976	.72
1977	.71
1978	.73

It is also helpful to view performance in the context of the distribution of investment pool returns. Tables 7 and 8 show the aggregate return and quartile return, respectively, for all investment pools.

*Gross returns in this instance means not adjusted for risk.

Table 7

Performance Distribution of All Investment Pools

One Year		Three Years	
Average Annual Total Return Earned	Number of Pools	Average Annual Total Return Earned	Number of Pools
12.5 to 15%	4	12.5 to 15%	4
10 to 12.5%	4	10 to 12.5%	6
7.5 to 10%	8	7.5 to 10%	34
5 to 7.5%	12	5.75 to 7.5%	36
2.5 to 5%	44	4.5 to 6%	32
0 to 2.5%	62	3.0 to 4.5%	24
-2.5 to 0%	22	0 to 3%	18
-7 to -2.5%	8	-2 to 0%	4
	164		158

Five Years		Ten Years	
Average Annual Total Return Earned	Number of Pools	Average Annual Total Return Earned	Number of Pools
Over 7.5%	10	6 to 7.5%	6
6 to 7.5%	11	5 to 6%	11
5 to 6%	15	4 to 5%	24
3.5 to 5%	39	3 to 4%	21
2 to 3.5%	28	2.75 to 3%	11
0 to 2%	27	2.5 to 2.75%	11
-1 to 0%	12	2 to 2.5%	5
-5 to -1%	6	0 to 2%	5
	148		94

Table 8

Quartile Distribution of All Investment Pools

	Average Annual Total Return Earned			
First Quartile	Over 4.04%	Over 7.59%	Over 4.94	Over 4.74%
Second Quartile	2.03 to 4.0%	5.73 to 7.59%	3.65 to 4.94%	3.68 to 4.74%
Third Quartile	.37 to 2.03%	4.20 to 5.73%	1.36 to 3.65%	2.86 to 3.68%
Fourth Quartile	Under .37%	Under 4.20%	Under 1.36%	Under 2.86%

In Exhibit III, the total return for each pool is listed, along with the relative ranking of each pool for the one-year, three-year, five-year, and ten-year periods ending June 30, 1978.

What should be of interest and concern to trustees and those administrators responsible for an investment pool is the return achieved from a blend of market indices that mimics their own pool. In the case of the average pool, this means the return achieved as a result of the investment of its 56 percent stock component, 30 percent bond component, 11 percent cash component, and 3 percent miscellaneous assets. On this basis, the one-year return of 2.49 percent for all investment pools appears high compared with the return of .31 percent which might be expected on the asset components of the pool shown in Table 9.

Table 9

Estimated Asset Component Return of All Investment Pools for the One-Year Period Ending June 30, 1978

Asset Component	Index	Fiscal 1977-78 Index Total Return Percent	Average Investment Pool Asset Component	Expected Income Return Increment
Stocks	S&P 500	-.16%	55.8%	-.09%
Bonds	Salomon Bros.	-.97%	30.3	-.29
Cash	Av. Treas. Bill	6.49	10.6	.69
Miscellaneous	N/A	0	3.3	0
Total			100.0%	.31%

Another way to estimate the average investment pool's total return is using the "excess return," the difference between the performances of the stock market (the S&P 500) and the risk-free rate (the treasury bill rate). Thus, it would be expected that if the market decreased .16 percent (as shown in Table 4) on a total return basis from June 30, 1977, to June 30, 1978, the average pool would decrease only 73 percent of the excess return and the return on the risk-free rate , or 1.64 percent. This is the result produced by the following equation:

$$\text{Expected Average Endowment Pool Return} = \text{Average Endowment Pool Beta} \left[\text{Excess Stock Market Return}\right] + \text{Risk-Free Rate}$$

The regression equation assumes the average pool is invested either in the stock market or in risk-free treasury bills and does not allow for investments in other assets. Of course, it is known that a good portion of endowment assets are invested in bonds. However, if bonds (rather than treasury bills) were the alternative investment to equities, the expected average investment pool return would be less than 1.64 percent.

Computations of expected performance using treasury bills rather than bonds as the sole alternative to equities result in a return which is closer to the actual average pool return of 2.49 percent, but this does not realistically portray the average investment pool. When investment results for stocks and bonds relative to treasury bill rates are as unusual as those which occurred in fiscal 1977-78, it is unlikely that results predicted by regression analysis will closely approach actual results.* Usually more reliable return approximations can be achieved by estimating asset component returns as in Table 9.

Table 10 shows an analysis of the components of principal and income change which make up total return. This table indicates the relatively higher income for the average investment pool than produced by stock market averages and less reduction in principal for the average investment pool as compared to the market. It also shows that the decline in bonds, as represented by the Salomon Index, was almost twice the decline in stocks as represented by the S&P 500.

Table 11 indicates the income return to be expected from various assets. The 5.61 percent expected income return based on the asset component analysis coincides with the actual income return. This tends to substantiate the statement that significant value was added by investment management.

Table 10

Principal, Income, and Total Return Performance for the One-Year Period Ending June 30, 1978

	Principal Percent Return	Income Percent Return	Total Percent Return
Average Endowment Pool	-3.12%	5.61%	2.49%
Dow-Jones Industrial Average	-10.62	4.81	-5.81
S&P 500 Index	-4.93	4.77	-0.16
Salomon Brothers Bond Index	-8.43	7.46	-0.97
Kuhn Loeb Bond Index	-7.44	7.77	0.33
Average One-Year Treasury Bill Rate	0	6.49	6.49

*That is, stocks are more risky than bonds, and bonds are more risky than treasury bills. Correspondingly, in up markets stocks should do better and treasury bills worse, and in down markets just the opposite should occur. In this case stocks fell in between treasury bills and bonds. (For a fuller explanation see the section in this report entitled "Risk Management and Return".)

Table 11

Average Investment Pool Income Percent Return for the One-Year Period Ending June 30, 1978

Asset Component	Index	Fiscal 1977-78 Income Percent Return	Investment Pool Asset Component	Expected Income Return Increment
Stocks	S&P 500	4.77%	55.8%	2.66%
Bonds	Salomon Bros.	7.46	30.3	2.26
Cash	Av. Treas. Bill	6.49	10.6	.69
Miscellaneous	N/A	0	3.3	0
Total			100%	5.61%

Performance Summary

It appears that the return achieved by management for the average investment pool is in excess of what might be expected based on the amount of risk taken. This conclusion is based primarily on the asset component analysis of the average pool. It takes into account constraints placed on the manager by the institution's trustees, such as the establishment of a debt to equity ratio or of an investment objective.

Performance by Investment Objectives

As can be seen in Table 4, page 8, for the one-year period ended June 30, 1978, the major broad market index for measuring stock performance (the S&P 500 Index) showed a slightly larger total return than did the major index for measuring bond performance (the Salomon Brothers Bond Index). Inasmuch as the pools with total return as an investment objective were 61.3 percent invested in stocks as compared to 49.7 percent for the pools with a balanced objective (see Table 16, page 19), one would expect the total return pools to slightly outperform the balanced pools. This, in fact, was the case for the year ended June 30, 1978. The total return pools had a total return of 2.90 percent as compared to 2.29 percent for the balanced pools--a difference of .61 percent. Applying the asset component analysis (as in Table 9) to each group of pools, one would expect the total return pools to show a .34 percent return and balanced pools a .28 percent return, a .06 percent difference. Table 12 shows that total return pools, on a risk-adjusted basis, appear to have performed .55 percent better than balanced pools. Both total return and balanced pools overperformed expected returns by 2.56 percent and 2.01 percent, respectively.

Table 12

Actual Returns Compared to Expected Asset Component Returns for the One-Year Period Ending June 30, 1978

	Actual Return	Expected Component Return*	Difference
Total Return Pools	2.90%	.34%	2.56%
Balanced or Income Pools	2.29	.28	2.01
Difference	.61%	.06%	.55%

*Calculated the same as in Table 9

Over the longer terms (three, five, and ten years), balanced pools nominally outperformed total return pools. It is difficult to make any significant conclusions for the ten-year period in terms of asset components since bond index data are not available. During the three- and five-year periods, bonds outperformed stocks, and this probably explains a good portion of the better performance of balanced pools compared to that of total return pools.

Performance by Size

For the ten-year period ending June 30, 1978, all three size groups performed similarly, with the under $10 million group performing best, followed by the over $50 million group, and then the $10-$50 million group. Because of the lack of bond data it is difficult to pinpoint over this period the extent to which asset composition affected results. From prior studies it has been observed that the smallest group has tended to be the leastequity-oriented and most bond-oriented of the three groups. This should have had a beneficial effect in the last five years of the ten-year period. The five-year results, as might be expected, show the under $10 million group as performing best, but only nominally. Correspondingly, a similar result is expected for the three-year period, but in fact the under $10 million group slightly underperformed. The reason for this result does not appear obvious. Were data available separately on the equity and bond portions of the various pools, a clearer explanation of results might be possible. For the one-year period a review of performance by asset components shows the over $50 million group outperforming expected results 3.11 percent versus .29 percent, while the $10-$50 million and under $10 million groups also outperformed expected results 2.73 percent versus .30 percent and 1.81 percent versus .30 percent, respectively.

Equity Only Performance

The 1977 CPS marked the first time NACUBO reported equity only and bond only performance. Separate data were provided on the equity portion of 24 pools and on the bond portion of 16 pools. For the 1978 CPS the number of participating equity and bond pools has remained about the same. The performance of these pools is shown in Table 13. Eighteen equity pools (75 percent) outperformed the S&P 500 and all outperformed the Dow Jones Industrial Average. Fourteen bond pools (82 percent) outperformed the Salomon Brothers Index. In aggregate bond pools outperformed the S&P 500

by about 225 basis points, and in aggregate bond pools outperformed the Salomon Index by more than 300 basis points. These results, if representative of all investment pools, tend to support the observation made earlier in this report that investment management has added value to endowment performance. This statement assumes that the underlying stock and bond assets of investment pools are not more risky than the S&P 500 and Salomon Index, respectively, and therefore superior results have in fact been achieved.

Table 13

Equity Only and Bond Only Performance Comparison for the One-Year Period Ending June 30, 1978

	Code Name	Total Return
1	Equity 26	8.7
2	Equity 4	7.5
3	Equity 27	7.5
4	Equity 6	7.3
5	Equity 9	6.8
6	Equity 24	6.8
7	Equity 5	4.7
8	Equity 8	4.2
9	Equity 19	3.6
10	Equity 3	3.4
11	Equity 25	2.8
12	Equity 7	2.3
13	Equity 13	1.3
14	Equity 18	.9
15	Equity 21	.5
16	Equity 22	.4
17	S&P IND	- .1
18	Equity 28	- .1
19	Equity 29	- .1
20	S&P 500	- .2
21	Equity 20	-1.2
22	Equity 14	-1.7
23	Equity 12	-2.1
24	Equity 15	-4.0
25	Equity 11	-4.0
26	Equity 23	-5.3
27	D.-Jones	-5.8
	Average of 24 Pools	2.1

	Code Name	Total Return
1	Bond 3	10.7
2	Bond 19	10.7
3	Bond 18	9.5
4	Bond 14	3.8
5	Bond 13	3.1
6	Bond 4	3.1
7	Bond 5	1.8
8	Bond 9	1.4
9	Bond 9	1.3
10	Bond 17	.6
11	Bond 20	.5
12	Bond 21	.4
13	Leh-Kuhn Loeb	.3
14	Bond 7	.3
15	Bond 16	- .6
16	Salamon	-1.0
17	Bond 12	-1.7
18	Bond 6	-3.1
19	Bond 15	-5.0
	Average of 17 Pools	2.2

Included for the first time in the Comparative Performance Study are equity only and bond only performance comparisons for the three- and five-year periods ending June 30. For equities, 10 pools (48 percent) outperformed the S&P 500 for the three year-period, and 7 pools (44 percent) outperformed the S&P 500 for the five-year period. The average pool had a 5.1 percent return compared to a 4.5 percent S&P 500 return in the former period, and a 2.1 percent return compared to a 4.5 percent in the latter period. The bond only analysis shows 7 pools (54 percent) outperforming the Salomon Brothers Index for the three years and 6 pools (86 percent) outperforming for the five years. Average pool performance was 9.6 percent and 7.3 percent, respectively, for the three- and five-year periods, compared to 7.7 percent and 5.8 percent for the Salomon Brothers Index. It is hoped that the inclusion of additional pools in the future will make these equity and bond analyses more meaningful.

Table 14

Equity Only and Bond Only Performance Comparison for the Three-Year Period Ending June 30, 1978

	Code Name	Total Return
1	Equity 4	13.9
2	Equity 27	13.9
3	Equity 3	10.4
4	Equity 22	9.4
5	Equity 8	8.3
6	Equity 9	7.8
7	Equity 24	7.7
8	Equity 19	6.4
9	Equity 25	5.8
10	Equity 13	5.2
11	S&P 500	4.5
12	Equity 20	4.2
13	Equity 14	4.2
14	S&P IND	3.7
15	Equity 12	3.4
16	Equity 11	3.3
17	Equity 28	2.9
18	D-Jones	2.2
19	Equity 18	1.8
20	Equity 29	1.6
21	Equity 7	1.5
22	Equity 15	- .8
23	Equity 6	-1.3
24	Equity 5	-1.6
	Average of 21 Pools	5.1

	Code Name	Total Return
1	Bond 13	17.5
2	Bond 3	14.4
3	Bond 19	13.8
4	Bond 6	9.1
5	Leh-Kuhn	9.1
6	Bond 4	9.0
7	Bond 15	8.8
8	Bond 21	8.3
9	Salomon	7.7
10	Bond 8	7.7
11	Bond 5	7.6
12	Bond 20	7.4
13	Bond 7	7.2
14	Bond 9	7.0
15	Bond 17	6.4
	Average of 13 Pools	9.6

Table 14 - Continued

Five-Year Period Ending June 30, 1978

Code	Name	Total Return
1	Equity 4	10.7
2	Equity 9	8.0
3	Equity 22	7.0
4	Equity 3	6.6
5	Equity 14	3.4
6	Equity 11	3.1
7	D-Jones	3.8
8	Equity 20	2.6
9	S&P 500	2.4
10	Equity 19	2.1
11	S&P IND	1.8
12	Equity 25	1.8
13	Equity 12	1.6
14	Equity 18	1.0
15	Equity 7	- .7
16	Equity 5	-1.2
17	Equity 28	-2.9
18	Equity 15	-3.7
19	Equity 6	-5.4
Average of 16 Pools		2.1

Code	Name	Total Return
1	Bond 13	10.0
2	Bond 3	9.7
3	Bond 9	7.0
4	Bond 20	6.8
5	Leh-Kuhn	6.6
6	Bond 8	6.5
7	Bond 4	6.0
8	Salomon	5.8
9	Bond 17	5.1
Average of 7 Pools		7.3

Internal Investment Management Performance

Of the 164 investment pools in the 1978 Comparative Performance Study, 25 are managed internally. The size of these pools is shown in Table 15.

Table 15

Internal Investment Management

Pool Size (Market Value)	Number in Each Group
Greater than $100 million	8
$50 to $100 million	0
$25 to $50 million	5
$10 to $25 million	2
$5 to $10 million	4
Under $5 million	6
TOTAL	25

The one-year total return for the 25 pools managed internally is 3.66 percent, compared to 2.28 percent for the 139 pools managed externally. In the 1977 CPS, the internally managed pools also outperformed the externally managed pools (6.05 percent compared to 4.88 percent).

ASSET COMPOSITION

Summary

Table 16 shows the asset composition of the investment pools as of June 30, 1978. On average 53.5 percent of the pooled funds were invested in stocks and 30.2 percent in bonds. As one would expect, the pools with a total return investment objective were more heavily invested in stocks (61.3 percent) than were balanced funds pools (49.7 percent). It can also be seen that the larger sized pools had greater amounts invested in stocks than did the smaller pools.

Table 16

Asset Composition of Investment Pools
June 30, 1978

	All Pools	By Investment Objective		By Size		
		Total Return	Balanced	Over $50 million	$10 to $50 million	Under $10 million
Stocks	53.5%	61.3%	49.7%	59.5%	53.6%	49.5%
Bonds	30.2	23.4	33.5	25.3	28.9	34.9
Cash	12.9	12.7	13.0	11.6	13.0	13.7
Miscellaneous	3.4	2.6	3.8	3.6	4.5	1.9
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 17 provides a comparison of June 30, 1978, asset composition figures with those of the previous year.

Table 17

Comparison of 1977 and 1978 Asset Composition

	June 30,		Net Change
	1977	1978	
Stocks	58.0%	53.5%	-4.5
Bonds	30.5	30.2	-0.3
Cash	8.2	12.9	+4.7
Miscellaneous	3.3	3.4	+0.1
	100.0%	100.0%	

Shifts in Investments

The net change in asset composition noted in Table 17 results from a combination of two factors. The first is a general decrease in stock and bond market prices; the second is a shift in investments. Tables 18-22 show the estimated shift in investments made by management decision. To the June 30, 1977, asset composition figures is applied the change in market price of each type of investment to arrive at projected asset composition figures for June 30, 1978. The actual composition amounts are then subtracted from the projected amounts to arrive at the net change caused by shifts in investments. The decrease of 4.93 percent in the market price of the S&P 500 Index is used to arrive at the projected stock figure, while the decrease of 8.43 percent in the market price of the Salomon Brothers Bond Index is used to arrive at the projected bond figure. The projections assume no market price change for cash or miscellaneous assets. While these computations do not provide a precise measurement of shifts in investments, they do provide reasonable estimates which can be studied.

Tables 18 through 22 show changes in asset composition of pools.

Table 18

Change in Asset Composition Caused by Shifts in Investments -- All Pools

	June 30, 1977 Actual	June 30, 1978 Predicted	June 30, 1978 Actual	June 30, 1978 Difference
Stocks	58.0%	58.3%	53.5	-4.8
Bonds	30.5	29.6	30.2	+0.6
Cash	8.2	8.7	12.9	+4.2
Miscellaneous	3.3	3.4	3.4	.0
	100.0%	100.0%	100.0%	

Table 19

Change in Asset Composition Caused by Shifts in Investments--
All Pools 1974-1978

	Percent Change -- Year Ended June 30					
	1974	1975	1976	1977	1978	Total
Stocks	-4.0%	-1.2%	-2.2%	-1.1%	-4.8%	-13.3%
Bonds	+1.3	+3.9	+4.2	.0	+0.6	10.0
Cash	+3.0	-2.9	-1.7	+1.0	4.2	3.6
Miscellaneous	-0.3	+0.2	-0.3	+0.1	.0	- 0.3

Table 20

Change in Asset Composition by Shifts in Investments --
by Investment Objective

	June 30, 1977	June 30, 1978		
	Actual	Predicted	Actual	Difference
Total Return Pools				
Stocks	67.3%	67.5%	61.3%	-6.2
Bonds	22.5	21.7	23.4	+1.7
Cash	7.7	8.1	12.7	+4.6
Miscellaneous	2.5	2.7	2.6	-0.1
	100.0%	100.0%	100.0%	
Balanced Pools				
Stocks	53.4	53.8%	49.7%	-4.1
Bonds	34.5	33.5	33.5	0
Cash	8.4	8.9	13.0	+4.1
Miscellaneous	3.7	3.8	3.8	0
	100.0%	100.0%	100.0%	

Table 21

Change in Asset Composition by Shifts in Investment -- by Size

	June 30, 1977 Actual	June 30, 1978 Predicted	June 30, 1978 Actual	Difference
Pools Over $50 Million				
Stocks	60.8%	61.0%	59.5%	-1.5%
Bonds	27.3	26.4	25.3	-1.1
Cash	8.4	8.9	11.6	2.7
Miscellaneous	3.5	3.7	3.6	-0.1
	100.0%	100.0%	100.0%	
Pools $10 to $50 Million				
Stocks	59.6%	59.9%	53.6%	-6.3%
Bonds	28.1	27.2	28.9	+1.7
Cash	7.8	8.2	13.0	+4.8
Miscellaneous	4.5	4.7	4.5	-0.2
	100.0%	100.0%	100.0%	
Pools Under $10 Million				
Stocks	54.2%	54.6%	49.5%	-5.1%
Bonds	35.5	34.5	34.9	+0.4
Cash	8.5	9.0	13.7	4.7
Miscellaneous	1.8	1.9	1.9	0
	100.0%	100.0%	100.0%	

Table 22

Change in Asset Compostion Caused by Shifts in Investments by Investment Objective

Percent Change - Year Ended June 30

Total Returns	1974	1975	1976	1977	1978	TOTAL
Stock	-5.1	- .5	-3.7	- .2	-6.2	-15.7
Bond	0.1	2.6	5.8	.2	1.7	10.4
Cash	5.0	-2.7	-1.8	.5	4.6	6.0
Miscellaneous	0	.6	- .7	- .5	-0.1	- .7
Balanced						
Stock	-3.5	-1.9	-1.4	-1.4	-4.1	-12.3
Bond	2.0	4.7	3.3	- .2	0	9.8
Cash	1.9	-2.8	-1.4	1.3	4.1	2.7
Miscellaneous	- .4	0	-0.1	.3	0	- .2
Over $50 Million						
Stock	-4.5	-1.9	-1.3	- .5	-1.5	- 9.7
Bond	- .1	5.1	1.3	- .9	-1.1	4.3
Cash	4.7	-3.4	-1.4	1.7	2.7	4.3
Miscellaneous	- .1	0.2	1.4	.3	- .1	- 1.1
$10-$50 Million						
Stock	-3.5	-2.9	-1.6	- .9	-6.3	-15.2
Bond	.5	4.3	4.3	- .9	1.7	9.9
Cash	3.6	-2.1	-1.4	1.5	4.8	6.4
Miscellaneous	- .6	.7	-1.3	.3	-0.2	- 1.1
Under $10 Million						
Stock	-4.2	.2	-3.4	-1.7	-5.1	-14.2
Bond	2.1	2.9	5.7	1.6	0.4	12.7
Cash	2.2	-3.0	-1.8	.2	4.7	2.3
Miscellaneous	- .1	- .1	- .5	- .1	0	- .8

Distribution of Asset Composition

Table 23 shows the distribution of asset composition by number of pools.

Table 23

Distribution of Asset Composition at June 30, 1978

	By Objective			By Size		
	All Pools	Total Return	Income or Balanced	Over $50 Million	$10 to $50 Million	Under $10 Million
	(Number of Pools)					
Percent Invested in Stocks						
90-100%	1	0	1	0	0	1
80-90%	4	4	0	3	0	1
70-80%	21	13	8	4	10	7
60-70%	34	15	19	12	16	6
50-60%	39	12	27	13	14	12
40-50%	29	3	26	4	16	9
30-40%	24	4	20	2	5	17
0-30%	12	3	9	1	5	6
	164	54	110	39	66	59
Percent Invested in Bonds						
90-100%	0	0	0	0	0	0
80- 90%	0	0	0	0	0	0
70- 80%	0	0	0	0	0	0
60- 70%	6	1	5	0	2	4
50- 60%	14	3	11	0	4	10
40- 50%	19	2	17	5	6	8
30- 40%	38	7	31	8	16	14
20- 30%	45	16	29	13	19	13
10- 20%	28	18	10	10	14	4
0- 10%	14	7	7	3	5	6
	164	54	110	39	66	59

Asset Diversification

In general investment pools tended to hold more stocks than bonds. As shown in Table 24 the smallest size group had the greatest ratio of the number of stocks to bonds. Also, total return pools tended to have stock positions (53 holdings) about two and one-half times their bond positions (20 holdings).

The total distribution of bond and stock positions for all pools and for the different size categories is portrayed on pages 26 and 27.

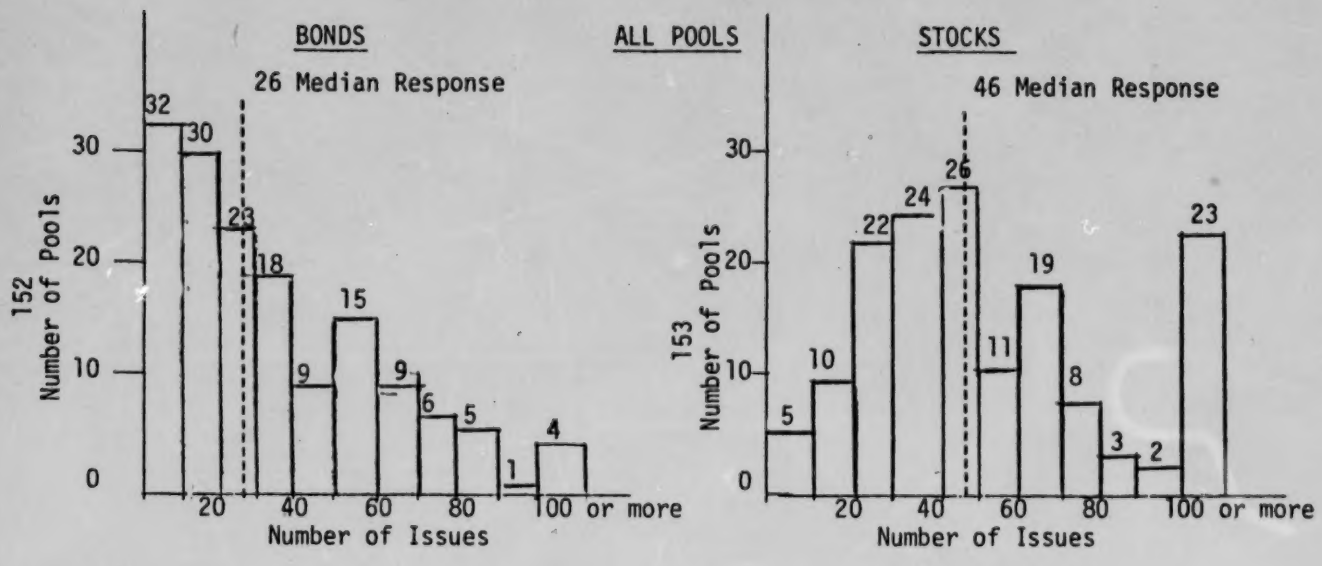
Table 24

Asset Diversification for Bonds and Stocks as of June 30, 1978

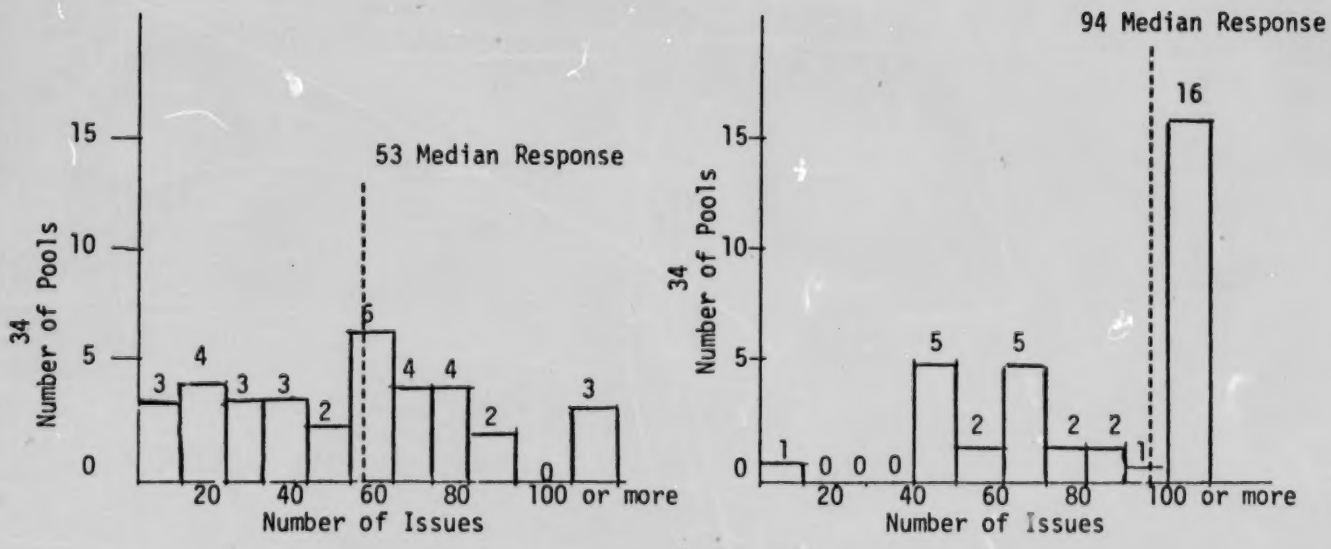
	Median Number of Bonds Held	Median Number of Stocks Held
All Pools	26	46
By Investment Objective:		
Total Return	20	53
Balanced	29	45
By Size:		
Over $50 Million	53	94
$10-$50 Million	32	55
Under $10 Million	18	33

GRAPH I

Asset Diversification
(1977-78)



OVER $50 MILLION

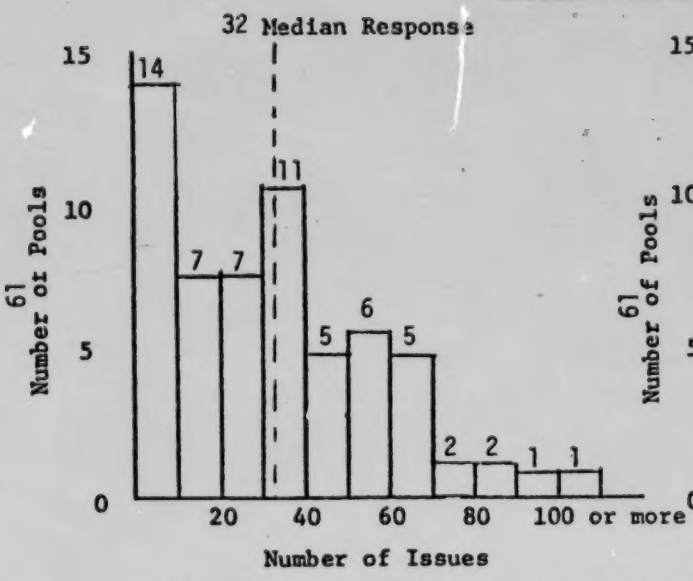


GRAPH I
(cont'd)

Asset Diversification

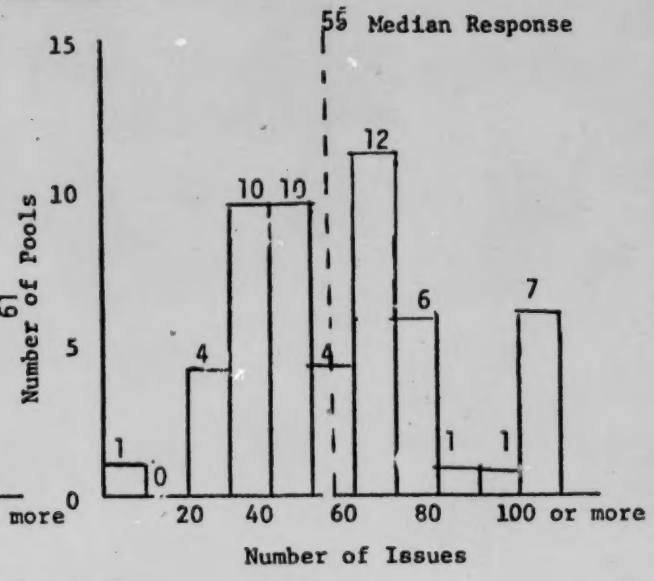
BONDS

$10 - $50 MILLION



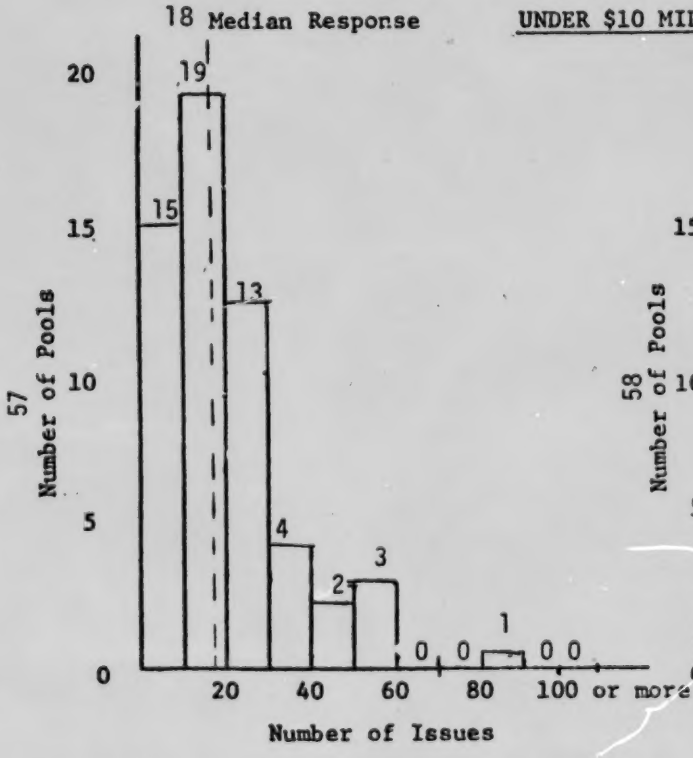
STOCKS

$10 - $50 MILLION



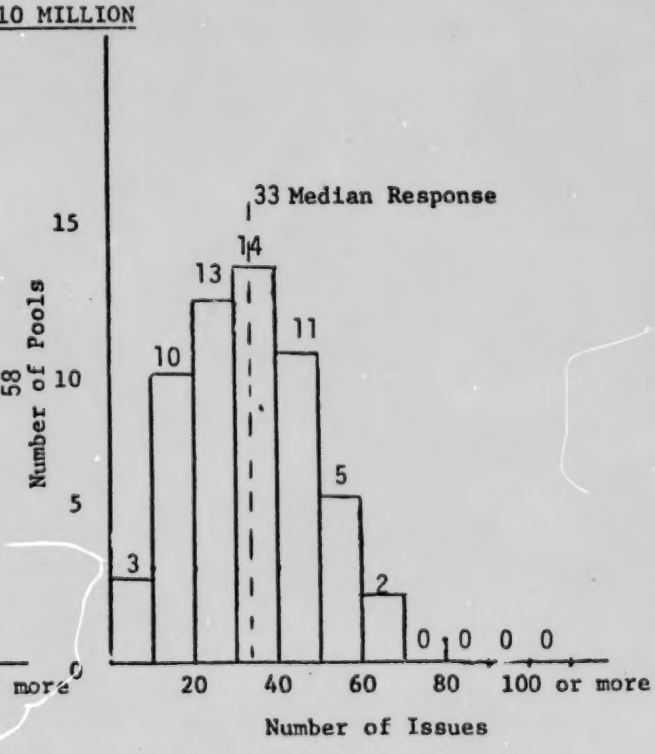
BONDS

UNDER $10 MILLION



STOCKS

UNDER $10 MILLION



Equity Price Earnings Ratio - "P/E"

Institutions were asked on an optional basis to provide the price earnings ratio P/E for the equity portion of their investment pools as of June 30, 1978. The average P/E for 35 pools was 9.1 compared to 9.1 for the Dow-Jones and 8.7 for the S&P 500.

Table 25

Investment Pool Equity Price Earnings Ratio (P/E) as of June 30, 1978

Investment Pool P/E	Under $5 Million	$5-$10 Million	$10-$25 Million	$25-$50 Million	$50-$100 Million	Over $100 Million	Total
6.5 - 7.0	1	0	0	0	0	0	1
7.0 - 7.5	1	0	1	0	0	0	2
7.5 - 8.0	1	0	0	0	0	0	1
8.0 - 8.5	1	1	1	3	0	1	7
8.5 - 9.0	0	1	0	0	0	1	2
9.0 - 9.5	2	1	0	2	1	1	7
9.5 - 10.0	0	0	1	1	2	0	4
10.0 - 10.5	0	0	0	1	0	0	1
10.5 - 11.0	2	0	1	0	0	1	4
11.0 - 11.5	0	0	2	0	0	0	2
11.5 - 12.0	0	0	0	0	0	0	0
12.0 - 15.0	0	0	1	0	0	1	2
Over 15.0	1	1	0	0	0	0	2
Total	9	4	7	7	3	5	35

Dow Jones	9.1
S&P 500	9.6
Average of 35 pools	9.1

Non-Controllable Assets

Non-controllable assets are those which although included in investment pools are not truly marketable or not included in the pool on solely their investment merit, i.e., investment in a dormitory, investment letter stock, donor restricted stock, etc.

Of the 164 pools, 133 (81 percent) had non-controllable assets of 5 percent or less, 24 had non-controllable assets of between 5 and 15 percent, 5 between 15 and 25 percent, and 2 had non-controllable assets of greater than 25 percent. Non-controllable assets for all pools represented 3 percent of the total assets of the pools as of June 30, 1978.

RISK MEASUREMENT AND RETURN

Description

There presently remains considerable controversy whether superior investment managers do exist and hence can produce an incremental return relative to the amount of risk taken, or whether the only way above average long-run return can be achieved is by assuming greater risks. Risk is also defined as a greater variability in return. A particular risk measure now widely used is an index of relative volatility, which is also known by the Greek letter "beta." The beta calculation or risk is essentially a comparison between the movements of returns from any individual stock or portfolio and the movements of returns from the market as a whole.*

The 1975 CPS report marked the first year that the calculation of volatility as a measurement of risk was introduced into the Comparative Performance Study. Incorporating risk when reviewing investment performance was continued in the 1976 CPS and 1977 CPS and is also continued in the 1978 report. In calculating such statistical measures for an investment pool, reliability is higher when information has been gathered over a long period of time. Although more accuracy could be achieved by using quarterly data, it is believed that data used in this study provide reasonably reliable results if there is adequate diversification of investment pool assets to the stock market, and the relationship of asset component return is similar to what might be expected. That is, stocks are more risky than bonds, and bonds are more risky than treasury bills. Correspondingly, in up markets stock should do better and treasury bills worse, and in down markets just the opposite should occur. When various investment media produce results which are related to perceived risk as shown in Table 26 for fiscal year 1976, beta analysis will prove valuable as a predictive tool. When asset component returns occur as they did in 1977 and 1978, beta analysis will be considerably less useful for predictive purposes. The reason for this is that the stock market is not an appropriate index to which to compare investment pools. However, at this time no better index exists.

*Managing Risk In An Uncertain Era, Malkiel & Firstenberg, Princeton University, Press, 1976.

Table 26

Fiscal 1976, Fiscal 1977, and Fiscal 1978 Asset Component Returns

Asset Component	Index	One-Year Return Ending June 30, 1976	One-Year Return Ending June 30, 1977	One-Year Return Ending June 30, 1978
Risk Free Rate	Treasury Bill	6.54%	5.57%	6.49%
Bonds	Salomon Bros.	10.08	14.65	- .97
Stocks	S&P 500	13.81	.46	- .16

In summary, in a regression analysis an investment pool's beta measure is the percentage fluctuation that can be expected and therefore predicted based on the related performance of the stock market. Generally, the S&P 500 Index is used as the market base. A beta of 1 means that a pool should move in unison with the market. If the market goes up 10 percent, the pools should go up 10 percent. A beta of more than 1, say 1.10, means the pool is 10 percent more volatile than the market; a pool with a beta of less than 1, say .90, is 10 percent less volatile. When the market goes up a more volatile pool should perform better than the market; it should perform worse when the market goes down. On the other hand, a pool that is less volatile (lower beta) should not perform as well in an up market but not lose as much in a down market. Any change in value will vary from that predicted by the beta measure if, and to the extent that, a pool is not thoroughly diversified and therefore exhibits distinct, unique characteristics not correlated to the market in general.

Observations

Table 27 shows beta coefficients calculated for the investment pools in the study. College and university endowment funds appear to be invested for less volatility and risk than the market as a whole. One would expect their performance to be below that of the stock market as a whole in a period of a rising market as was the case in fiscal 1975 and 1976, and above the stock market in a period of a declining market as was the case in fiscal 1977 and 1978.

Table 27

Beta Coefficients

	Five Years	Ten Years
All Pools	.74	.73
	.74	.73
By Investment Objectives:		
Total Return Pools	.78	.79
Balanced Pools	.72	.69
By Size:		
Over $50 Million	.77	.76
$10 to $50 Million	.76	.75
Under $10 Million	.69	.62
Comparative Indices:		
Dow-Jones Industrial Average	.88	.84
Salomon Brothers Bond Index	.65	N/A
S&P 500 Index	1.00	1.00

STOCK AND BOND TURNOVER

Method of Calculation

Turnover, as reported in this study, is determined by dividing the lesser of stock purchase or sale activity by the average of the beginning and ending year asset value of stocks. For example, a portfolio with $80 million in stocks at June 30, 1977, and $100 million at June 30, 1978, that purchased during the year $25 million in stocks and sold $18 million, would have had a turnover of 20 percent -- $18 million in sales divided by $90 million. This same methodology is used for bond turnover.

Table 28

Stock Turnover

	1974-75 Median Response	1975-76 Median Response	1976-77 Median Response	1977-78 Median Response	1977-78 Number Responding
All Pools	17.0%	16.1%	15.1%	14.3%	133
By Investment Objective:					
Total Return Pools	17.4	16.1	15.1	17.0	45
Balanced Pools	16.5	15.8	16.1	13.5	88
By Size:					
Over $50 Million	19.7	15.4	15.0	15.3	24
$10 to $50 Million	17.0	15.5	20.8	17.0	57
Under $10 Million	14.4	18.0	11.4	12.0	52

Bond Turnover

All Pools				13.7	125
By Investment Objective:					
Total Return				9.6	43
Balanced Pools				20.0	82
By Size:					
Over $50 Million				28.4	23
$10 to $50 Million				12.4	54
Under $10 Million				7.7	48

Stock and Bond Turnover and Performance Implications

In the 1975 study the 25 pools with the greatest turnover in both fiscal 1973-74 and 1974-75 were grouped for the purpose of measuring performance. An attempt was made to identify whether high turnover had a negative effect on performance. The results did not indicate negative relative performance in either year, and actually in 1974-75 the high turnover group did rather well. For 1975-76 the top 25 turnover group was also in line with comparable investment pool performance, and grouped for the first time were the 25 pools with the lowest turnover. This group proved to be the worst performing group when compared to pools grouped by their investment objective or market size. On this basis, the low turnover group also was the worst performing group for fiscal 1977, while the result for the group with the highest turnover again appeared in line. For fiscal 1978 the group with the lowest equity turnover also underperformed as shown in Table 29. The highest turnover group outperformed all groupings shown in Table 4. There appeared to be very little difference in performance between the highest and lowest bond turnover groups, and results were in line with other groups is shown in Table 30.

Table 29

Pools with the Highest and Lowest Equity Turnover Percentage*
for the One-Year Period Ending June 30, 1978
Ranked According to Average Total Return

Highest Turnover				Lower Turnover			
Rank	Code Name	1978 Turnover Percent	1978 Average Total Return	Rank	Code Name	1978 Turnover Percent	1978 Average Total Return
1	C44	51.0%	13.76%	1	C10	4.4%	14.22%
2	C85	115.0	9.74	2	C70	3.0	10.99
3	C35	33.4	8.28	3	C86	5.0	5.47
4	E50	99.3	7.73	4	C55	0.6	5.22
5	C13	55.0	6.26	5	E3	2.6	3.46
6	E33	87.0	4.12	6	C14	0	3.39
7	C66	63.0	4.04	7	C51	5.1	3.24
8	E63	50.0	4.04	8	E39	5.1	2.16
9	E8	35.0	3.91	9	E18	1.3	2.11
10	E68	39.7	3.77	10	E91	1.3	1.7
11	E64	114.0	3.74	11	C77	5.3	1.45
12	C48	72.6	3.37	12	C50	4.7	1.36
13	C82	39.0	3.1	13	C22	0	0.69
14	C39	60.6	3.07	14	C71	5.0	0.67
15	E36	93.0	2.98	15	C93	0	0.48
16	E24	42.3	2.97	16	Leh-Kuhn		0.33
17	E95	63.0	2.79	17	C36	1.2	0.17
18	C2	53.0	2.73	18	C16	0.6	0.12
19	E11	33.4	2.62	19	C84	0	0.1
20	E76	82.0	1.22	20	C31	2.9	0.06
21	C30	37.0	0.76	21	SP-Ind		- 0.1
22	E77	80.0	0.35	22	SP500		- 0.16
23	Leh-Kuhn		0.33	23	Salomon		- 0.97
24	SP-Ind		-0.1	24	E48	5.0	- 1.54
25	SP500		-0.16	25	C3	1.1	- 1.79
26	C29	86.6	-0.43	26	C33	0.2	- 2.04
27	C47	33.0	-0.7	27	E65	0	- 2.04
28	Salomon		-0.97	28	E94	3.1	- 2.82
29	E52	42.0	-1.47	29	E12	5.1	- 4.55
30	D-Jones		-5.81	30	D-Jones		- 5.81
Arithmetic Average of 25 Pools		62.4%	3.71%	Arithmetic Average of 25 Pools		2.5%	1.69%

*NOTE: All pools included in this analysis had an equity exposure of at least 35 percent.

Table 30

Pools with the Highest and Lowest Bond Turnover Percentage*
for the One-Year Period Ending June 30, 1978
Ranked According to Average Total Return

Highest Turnover				Lowest Turnover			
Rank	Code Name	1978 Turnover Percent	1978 Average Total Return	Rank	Code Name	1978 Turnover Percent	1978 Average Total Return
1	C27	46.0%	13.77%	1	C44	0%	13.76%
2	C56	49.5	4.67	2	C38	0	10.54
3	C17	99.6	4.44	3	C85	6.0	9.74
4	C26	145.9	4.19	4	C92	4.0	6.52
5	E33	89.0	4.12	5	C13	2.0	6.26
6	C65	175.9	4.05	6	C86	3.0	5.47
7	E8	63.0	3.91	7	C24	0	3.49
8	E64	146.0	3.74	8	E3	0	3.46
9	C88	49.2	3.15	9	C14	0	3.39
10	C39	139.2	3.07	10	E4	0	2.98
11	E36	160.0	2.98	11	C11	6.1	2.82
12	E73	128.9	2.43	12	C89	3.6	2.78
13	C15	50.3	2.25	13	C59	3.0	1.94
14	E85	100.8	1.64	14	E91	1.9	1.7
15	E66	52.0	1.37	15	E10	0	1.17
16	E76	71.0	1.22	16	E26	0	0.73
17	C23	86.3	0.89	17	C22	5.3	0.69
18	C30	46.0	0.76	18	C80	3.1	0.41
19	E17	149.0	0.59	19	Leh-Kuhn		0.33
20	E77	98.0	0.35	20	C4	1.0	0.11
21	Leh-Kuhn		0.33	21	C84	0	0.1
22	SP-Ind		- 0.1	22	SP-Ind		-0.1
23	SP500		- 0.16	23	SP500		-0.16
24	C25	97.0	- 0.37	24	C32	2.0	-0.22
25	C29	66.1	- 0.43	25	Salomon		-0.97
26	Salomon		- 0.97	26	C33	0	-2.04
27	E27	98.0	- 1	27	E94	1.4	-2.82
28	E92	58.4	- 1.63	28	E12	0	-4.55
29	E47	76.0	- 1.7	29	E44	0	-4.78
30	D-Jones		- 5.81	30	DOJones		-5.81
Arithmetic Average of 25 Pools		93.6%	2.34%	Arithmetic Average of 25 pools		1.7%	2.55%

*NOTE: All pools included in this analysis had bond exposure of at least 20 percent.

INVESTMENT ADVISORY FEES AND DISCRETION

Investment Fees

Of the 139 institutions which used external investment advisors, 128 (92 percent) responded to the investment advisor fee question. For pools at these institutions the median fee paid was .24 percent and the average fee .26 percent.

Table 31 shows the fee paid for all pools and for the various size groupings. For those managers who have discretion economies of scale do seem to come into play as there is differentiation among the largest, middle-sized, and smallest groups. This relationship did not hold true for institutions which did not give their managers discretion, as only large pools seemed to achieve economies.

Investment Discretion

Of 128 institutions, 31 (24 Percent) indicated that they do not give their advisor discretion, while 97 (76 percent) indicated that they do give discretion. The largest institutions are more likely to give their managers discretion. The results in Table 31 are consistent with those of the 1975, 1976, and 1977 studies in that those institutions which do not give discretion pay less than those which do.

Table 31

Advisory Fees in Terms of Investment Discretion

	Number of Institutions	Arithmetic Average	Median Response
Give Discretion			
Over $50 Million	22	.22	.22
$10 to $50 Million	39	.28	.25
Under $10 Million	36	.30	.27
Subtotal	97	.27	.25
Do Not Give Discretion			
Over $50 Million	3	.21	.12
$10 to $50 Million	16	.24	.22
Under $10 Million	12	.21	.22
Subtotal	31	.22	.18
Total	128	.26	.24

Table 32

Investment Advisor Fees and Performances of the 25 Pools with the Highest and Lowest Advisor Fees for the One-Year Period Ending June 30, 1978, Ranked According to Average Total Return

Highest Fee			Lowest Fee		
Rank	Code Name	1978 Average Total Return	Rank	Code Name	1978 Average Total Return
1	C35	8.28%	1	C63	9.04%
2	C60	8.16	2	C34	6.48
3	E62	6.88	3	E5	5.24
4	E41	5.29	4	E32	4.79
5	E19	4.58	5	C26	4.19
6	E82	4.39	6	E3	3.46
7	C65	4.05	7	E4	2.98
8	C66	4.04	8	C81	2.88
9	E68	3.77	9	E11	2.62
10	E64	3.74	10	E39	2.16
11	E83	3.73	11	C77	1.45
12	C48	3.37	12	E56	1.33
13	E95	2.79	13	E89	1.27
14	C2	2.73	14	E10	1.17
15	C59	1.94	15	C19	0.37
16	C6	1.78	16	Leh-Kuhn	0.33
17	C79	1.56	17	E84	0.28
18	C62	1.3	18	C36	0.17
19	E7	0.86	19	C16	0.12
20	C94	0.56	20	C68	-0.04
21	C80	0.41	21	SP-Ind	-0.1
22	Leh-Kuhn	0.33	22	SP500	-0.16
23	SP-Ind	-0.1	23	C37	-0.54
24	SP500	-0.16	24	E71	-0.8
25	C29	-0.43	25	Salomon	-0.97
26	Salomon	-0.97	26	E47	-1.7
27	E23	-1.27	27	E74	-1.72
28	C20	-1.68	28	C3	-1.79
29	E65	-2.04	29	C75	-4.72
30	D-Jones	-5.81	30	D-Jones	-5.81
Arithmetic Average of 25 Pools		2.75%	Arithmetic Average of 25 Pools		1.55%

SECTION II -- ENDOWMENT CHARACTERISTICS

Introduction

As part of the ongoing Comparative Performance Study, NACUBO has attempted to build a data base of information concerning endowment funds. In recent years, this has been broadened to include endowment characteristics. This information has both a direct and indirect involvement with endowment investing. Section II of this report includes information concerning endowment gift giving, endowment wealth, endowment principal and income, option writing and the like. Last year new areas included information on life income funds, non-security assets, and assets over which institutions have no control, i.e., investor letter stock or donor-restricted assets. This year information on the application of the total return concept for budgeting, real estate investing, real estate gifts, and the use of the Depository Trust Company are included. There is also a section on custodial fees.

General Information and Endowment Distribution

Of the 144 institutions responding, 127 (88 percent) have fiscal years ending June 30; the next most frequent responses were the last days of May and August with 5 and 6, respectively. Only 3 used September 30, and the remaining 3 pools had varying dates throughout the year.

The distribution and size of the 144 institutions reporting endowment size as of June 30, 1978, are categorized by independent and state-supported institutions in Table 33.

Table 33

Endowment Size Distribution of 144 Independent and Public Institutions

	Independent	Public	Total	Percent of 144 Answering
Greater than $100 Million	23	2	25	18%
$50 to $100 Million	18	4	22	15
$25 to $50 Million	20	2	22	15
$10 to $25 Million	28	11	39	27
$5 to $10 Million	14	5	19	13
Under $5 Million	5	12	17	12
Total	108	36	144	100%

It is interesting to note that the distribution by asset size of those reporting in the 1978 survey is markedly different from that of the 1974 survey as shown in Table 34. In the 1975 through 1978 surveys, the percentage of smaller institutions participating (those with market values under $10 million in size at the end of each fiscal year) declined from the prior year. At the same time the number of institutions with larger endowments (those over $50 million) has increased.

Table 34

Endowment Size Percent Distribution of the 1974 through 1978 Surveys

	1974	1975	1976	1977	1978
Greater than $50 Million	22%	24%	29%	32%	33%
$10 to $50 Million	35	36	42	41	42
Under $10 Million	43	40	29	27	25
Total	100%	100%	100%	100%	100%
Number Participating	145	147	138	148	144

Life Income Funds

Life income funds are those the income of which does not flow through to the institution during the lifetime of the donor or beneficiary, yet the principal of which has been designated to the institution as a remainderman.

In Table 4, page 8 of Section I of this report, the dollar amount of life income funds for each institution reporting such information is indicated. There seem to be major practical differences among institutions in regard to both life income fund investing and financial statement reporting. Of those institutions indicating that they had such funds, about one-third combined these funds with their endowment for investment purposes and about one-half for financial reporting purposes.

To the extent that institutions for financial report purposes include life income funds, wealth probably is being overstated since such assets are not currently earning revenue for the support of the institution. For example, a million dollars in life income funds, with a 10-year average expectancy, invested equally in stocks and bonds, that would earn a 9 percent total return (3 percent appreciation and 6 percent payout for beneficiaries) would have a present value of about $700,000 assuming a 6½ percent inflation rate. If the expectancy were longer, or appreciation less, or inflation rate higher, the present value would be less. Some 15 percent of all 113 institutions with life income funds have an additional 10 percent above their endowed assets represented by life income funds.

As shown in Table 35, life income funds represent 3.7 percent of the average endowment of the 113 reporting such funds.

Table 35

Distribution of June 30, 1978, Life Income Funds as a Percent of Total Endowment Market Value*
Range of Responses

	Independent Institutions	Public Institutions	Under $10 Million	$10 to $50 Million	Over $50 Million	All Institutions
Less than 1%	16	8	5	7	12	24
1 - 2%	13	2	2	7	6	15
2 - 2.5%	7	0	0	5	2	7
2.5 - 3%	2	3	1	2	2	5
3 - 3.5%	4	0	1	1	2	4
3.5 - 5%	20	1	5	8	8	21
5 - 6.5%	5	1	0	2	4	6
6.5 - 8%	7	0	2	1	4	7
8 - 10%	6	1	0	6	1	7
10 - 12.5%	4	3	2	4	1	7
12.5 - 15%	4	0	0	2	2	4
15 - 20%	3	0	0	2	1	3
20 - 25%	0	0	0	0	0	0
Greater than 25%	1	2	2	1	0	3
Total	92	21	20	48	45	113
Median Response	3.9%	2.6%	3.7%	4.0%	3.0%	3.7%

*NOTE: Including life income funds

Non-Security Assets

Ninety-eight institutions reported the portion of their total endowment invested in non-security assets. The composition of such assets varies among institutions, but typically this segment of the endowment contains employee mortgages which may be at "incentive rates" related to employment, and plant and facilities assets. The earnings from such assets are not typical, however, since they usually are set by the administration or the institution's trustees. In such instances, the return would constitute interest in the case of employee mortgages, room rent in the case of dormitories, transfer charges in the case of heating facilities, etc. The point to be made in regard to financial implications is that an institution with a heavy endowment commitment in non-security assets probably is less flexible in terms of its investment

alternatives. Where non-security assets represent a large portion of the total endowment, "true wealth" may be overstated. In terms of non-security assets, there does not seem to be much difference among the various endowment size groupings or between independent and public institutions. Table 36 shows the range of responses.

Table 36

Distribution of June 30, 1978, Non-Security Assets as a Percent of Total Endowment Market Value*
Range of Responses

	Independent Institutions	Public Institutions	Under $10 Million	$10 to $50 Million	Over $50 Million	All Institutions
Less than 1%	15	6	2	9	10	21
1 - 2%	6	1	0	4	3	7
2 - 2.5%	4	0	1	3	0	4
2.5 - 3%	4	0	1	1	2	4
3 - 3.5%	4	1	2	0	3	5
3.5 - 5%	8	2	1	7	2	10
5 - 6.5%	8	1	1	3	5	9
6.5 - 8%	3	2	0	2	3	5
8 - 10%	8	1	2	2	5	9
10 - 12.5%	3	0	0	2	1	3
12.5 - 15%	6	1	3	2	2	7
15 - 20%	4	0	1	0	3	4
20 - 25%	2	1	1	2	0	3
Greater than 25%	6	1	0	6	1	7
Total	81	17	15	43	40	98
Median Response	4.8%	3.6%	6.1%	4.6%	5.0%	4.7%

*NOTE: Including life income funds

Non-Controllable Assets

Sixty-four institutions indicated they had non-controllable assets as shown in Table 37. Of those reporting non-controllable assets, public institutions and institutions under $10 million had the greatest amount of non-controllable assets.

Table 37

Distribution of June 30, 1978, Non-Controllable Assets as a Percent of Total Endowment Market Value*
Ranges of Responses

	Independent Institutions	Public Institutions	Under $10 Million	$10 to $50 Million	Over $50 Million	All Institutions
Less than 1%	19	1	1	11	8	20
1 - 2%	9	0	0	4	5	9
2 - 2.5%	3	0	0	2	1	3
2.5 - 3%	1	1	0	1	1	2
3 - 3.5%	4	1	2	2	1	5
3.5 - 5%	3	1	1	1	2	4
5 - 6.5%	5	2	2	3	2	7
6.5 - 8%	3	1	2	1	1	4
8 - 10%	0	0	0	0	0	0
10 - 12.5%	3	1	0	2	2	4
12.5 - 15%	0	0	0	0	0	0
15 - 20%	2	0	0	2	0	2
20 - 25%	1	1	1	0	1	2
Greater than 25%	1	1	2	0	0	2
Total	54	10	11	29	24	64
Median Response	2.0%	5.9%	5.9%	1.9%	2.0%	2.5%

*NOTE: Including life income funds.

Endowment Growth and Real Growth

The trend toward increased endowment size, which would explain the shifting of participants into a larger sized category, seems to be the result of a continuing flow of new gifts added to endowment offsetting depreciation in both the bond and equity security markets. A crude approximation of endowment growth can be made for the five-year period ending June 30, 1978. The calculation is based on information received from prior NACUBO questionnaires and indicates that as a group "endowments" at June 30, 1978, are probably just about back to the same dollar value as of June 30, 1973. However, in real terms when inflation is taken into account, endowment has actually declined about 5 percent for the one-year period ending June 30, 1978, and about 25 percent since June 30, 1973. To help put this into some perspective, Table 38 compares the S&P 500, the Dow-Jones Industrial Index, the Salomon Brothers High-Grade Bond Index, and endowment both before and after inflation. The latter is adjusted by both the Consumer Price Index (CPI) and the Higher Education Price Index (HEPI).

The table clearly identifies why the recent rebound from the levels of the 1974 bond and equity markets leaves educational institutions far from whole, that is, $100 of endowment at June 30, 1973, would have the purchasing power of only about $75 at June 30, 1978. Stated another way, endowment would have to rise an additional 33 percent to maintain 1973 purchasing power in 1978. This devasting loss in purchasing power is being felt throughout the college and university world and helps explain some of the more recent fiscal problems being experienced by many endowed institutions, especially those that rely more heavily on their endowment to meet current operating expenses. It is not surprising that many institutions have recently undertaken major fund drives to restore the purchasing power of their endowments.

Table 38

Five-Year Appreciation Comparison of Indices
Endowment before and after Inflation

	6/30/73	6/30/74	6/30/75	6/30/76	6/30/77	6/30/78	Five-Year Percent Change
Dow-Jones	891.71	802.41	878.99	1002.78	916.30	818.95	- 8.16%
S&P 500	104.26	86.00	95.19	104.28	100.48	95.53	- 8.37
Salomon	93.70	80.53	85.26	86.82	92.43	84.64	- 9.67
Endowment	100.00	83.30	91.05	98.52	102.36	103.79	3.79
Real Endowment Based on CPI*	100.00	78.22	78.15	78.95	77.24	73.54	-26.46
Real Endowment Based on HEPI*	100.00	77.78	78.28	79.46	77.52	73.67	-26.33

*CPI (Consumer Price Index) and HEPI (Higher Education Price Index) figures obtained from The National Institute of Education, Higher Education Prices and Price Indexes 1978 Supplement, by D. Kent Halstead, page 10.

Table 38 - Continued

Fiscal Year	CPI	Year to Year Percent Change	HEPI	Year to Year Percent Change
1971	100.0	5.2%	100.0	6.4%
1972	103.6	3.6	105.6	5.6
1973	107.7	3.9	111.2	5.3
1974	117.3	8.9	119.1	7.1
1975	130.4	11.2	129.2	8.6
1976	139.6	7.1	137.8	6.6
1977	147.7	5.8	146.7	6.5
1978	157.7	6.8	156.5	6.7

Fiscal 1978 Endowment

The 144 institutions reporting in the 1978 survey indicated that their total market value as of June 30, 1978, increased approximately 1.4 percent in asset value to $10.6 billion for the June 30, 1977-78, fiscal year. This figure included some $460 million in life income fund assets. As shown in Table 39, the increase in asset value or wealth as represented by the median institution was fairly similar for independent and public institutions, with those institutions classified as under $10 million in size having the greatest increase, followed by the $10 to $50 million group and then the over $50 million group. This seems in line with Table 40, gifts in 1977-78 as a percent of total market value of endowment. The smaller the institution, the greater endowment gifts as a percent of market value. The "wealth" percentage is not a measure of investment performance as it does not take into account withdrawals from, or additions to, endowment. It does, however, provide an indication of increased purchasing power.

Table 39

Endowment Size, Wealth, and Average Yield Percent*

	6/30/78 Endowment Market Value (In Billions)	1978 Average Endowment Market Value (In Millions)	1978 Median Percentage Increase In Wealth	6/30/78 Median Endowment (In Millions)	Mean Average Yield Percent
Over $50 Million	$ 9.037	$192.271	.8%	$104.341	5.8%
$10 to $50 Million	1.356	22.234	.9	17.568	5.7
Under $10 Million	189	5.258	4.9	5.127	6.2
Independent	9.506	88.018	1.4	29.397	5.7
Public	1.076	29.900	1.5	13.050	6.5
All Institutions	$10.582	% 73.488	1.4%	$ 23.064	5.8%

*NOTE: Endowment market value and wealth figures include life income funds. Yield percentages exclude life income funds.

Gifts to Endowment

Because each college and university and its alumni are unique, it is ofter difficult to draw analogies relating to gift giving among institutions. It is hoped that from data gathered over longer periods of time many useful trends will appear.

Table 40

Fiscal 1975 through 1978 Gifts to Endowment
As a Percent of Average Market Value

	1974-75 Median Endowment	1975-76 Median Endowment	1976-77 Median Endowment	1977-78 Median Endowment
Over $50 Million	2.0%	3.1%	2.3%	2.4%
$10 to $50 Million	2.3	2.2	3.1	3.4
Under $10 Million	3.1	5.1	6.7	4.5
Independent	2.3	2.4	3.0	2.7
Public	3.6	4.7	3.7	4.1
All Institutions	2.6%	2.7%	3.1%	3.4%

The top right-hand portion of Table 41 shows 1977-78 quasi-endowment gifts as a percentage of total endowment gifts. Quasi-endowment gifts are deemed more valuable than restricted gifts as these are gifts over which the institution has the greater discretion. The top left-hand portion of the table shows that independent institutions have more quasi-endowment as a percentage of total endowment than do public institutions, and that the largest institutions have more quasi-endowment than the middle-sized institutions which have more quasi-endowment than the smallest sized grouping.

Table 41

Quasi-Endowment

	Total Quasi-Endowment as a Percentage of Total Endowment		1977-78 Quasi-Endowment Gifts as a Percentage of Total 1977-78 Gifts	
	Mean Endowment	Median Endowment	Mean Endowment	Median Endowment
Over $50 Million	35.5%	31.0%	32.3%	25.6%
$10 to $50 Million	25.1	23.0	24.1	14.0
Under $10 Million	21.5	12.0	26.6	6.4
Independent	28.9	24.7	25.9	18.4
Public	22.9	15.0	30.6	20.1
All Institutions	27.3%	23.0%	27.2%	18.4%

Table 41 - Continued

Total Quasi-Endowment as a Percentage of Total Endowment
Range of Responses

	Independent Institutions	Public Institutions	Under $10 Million	$10-$50 Million	Over $50 Million	All Institutions
Less than 5%	15	10	10	14	1	25
5 - 10%	3	3	4	0	2	6
10 - 15%	6	4	6	3	1	10
15 - 20%	12	2	3	6	5	14
20 - 25%	12	2	0	9	5	14
25 - 30%	7	1	1	5	2	8
30 - 45%	18	7	3	10	12	25
45 - 60%	9	4	2	6	5	13
60 - 75%	8	1	4	1	4	9
75 - 90%	4	1	1	2	2	5
Greater than 90%	0	0	0	0	0	0
Total	94	35	34	56	39	129

Current Fund Revenue and Endowment Income

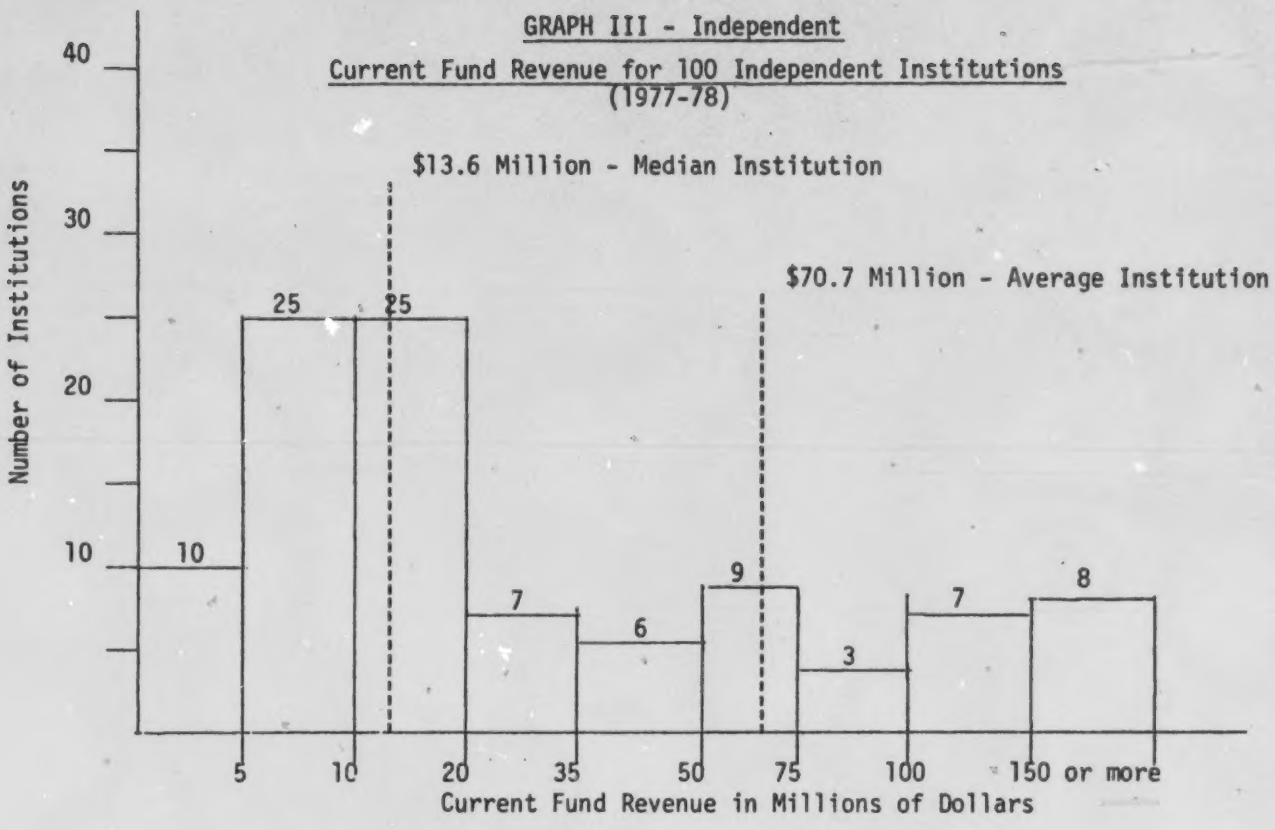
Current fund revenue and endowment income for both independent and public institutions are portrayed in Graphs III and IV. It can be seen from Graph III that 10 independent and 2 publicly controlled institutions had current fund revenue of less than $5 million, 25 independent and 1 public institutions had current fund revenue of $5 to $10 million, etc. Graph IV shows, for example, that 7 independent institutions, or 8 percent (7/88) of all independent institutions responding, and 13 public institutions, or 65 percent (13/20) of all public institutions responding, received income from endowment constituting less than 1 percent of current fund revenue, etc. The average amount of current fund revenue for independent and public institutions is $70.7 million and $211 million, respectively. The median figures are 13.6 million and $101 million. The average percent of endowment income to current fund revenue for independent and public institutions is 12.0 percent and 2.6 percent. The median figures are 8.5 percent and .5 percent. This graph depicts the greater importance placed on the endowment of independent institutions in maintaining quality education relative to that of public institutions.

Budget Guideline

Graph V illustrates the amount of endowment spent for current operations as a percentage of the average market value. This percentage is the amount utilized from the endowment including any appropriation of endowment principal during the fiscal year to help meet the current budget. In a sense it is a budget "guideline" showing what institutions during fiscal 1977-78 contributed from their total endowment to support their immediate needs. The budget guideline for the average and median was 5.4 percent and 5.6 percent, respectively.

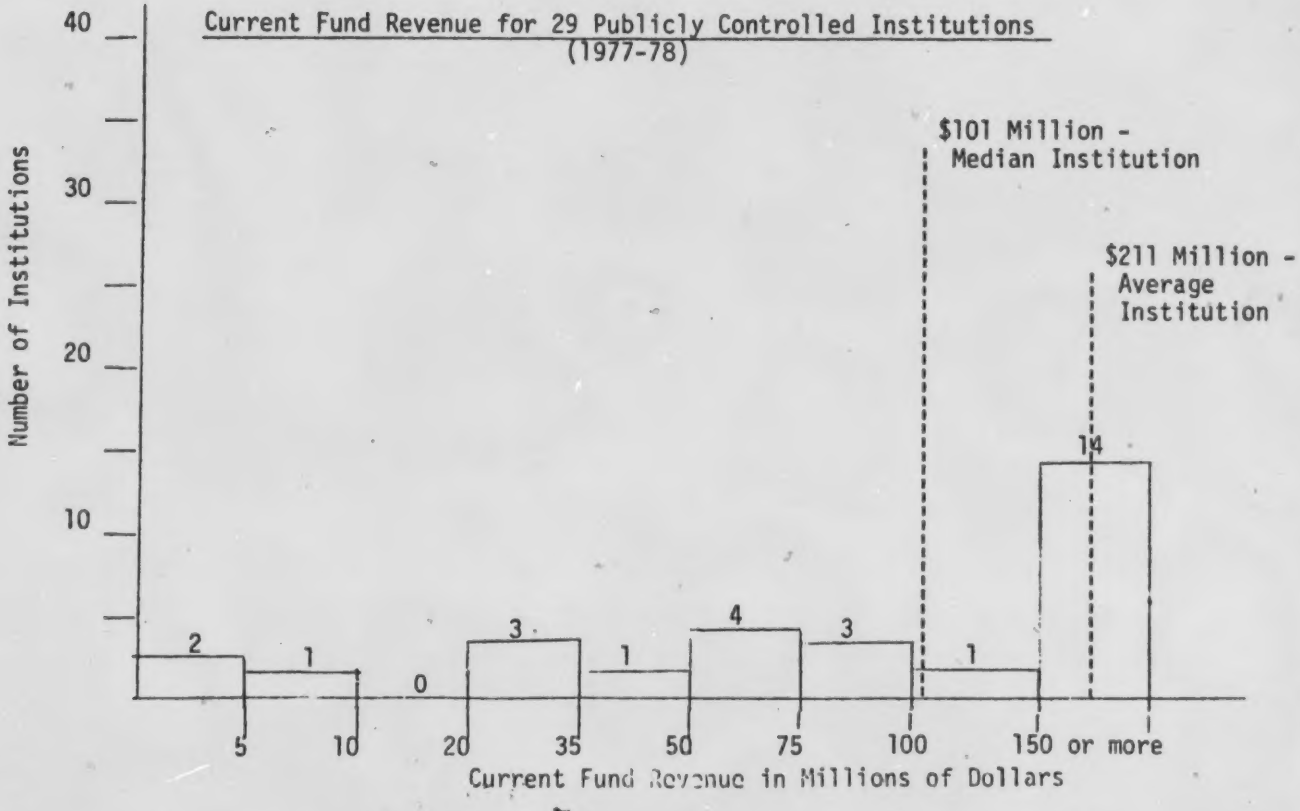
GRAPH III - Independent

Current Fund Revenue for 100 Independent Institutions
(1977-78)



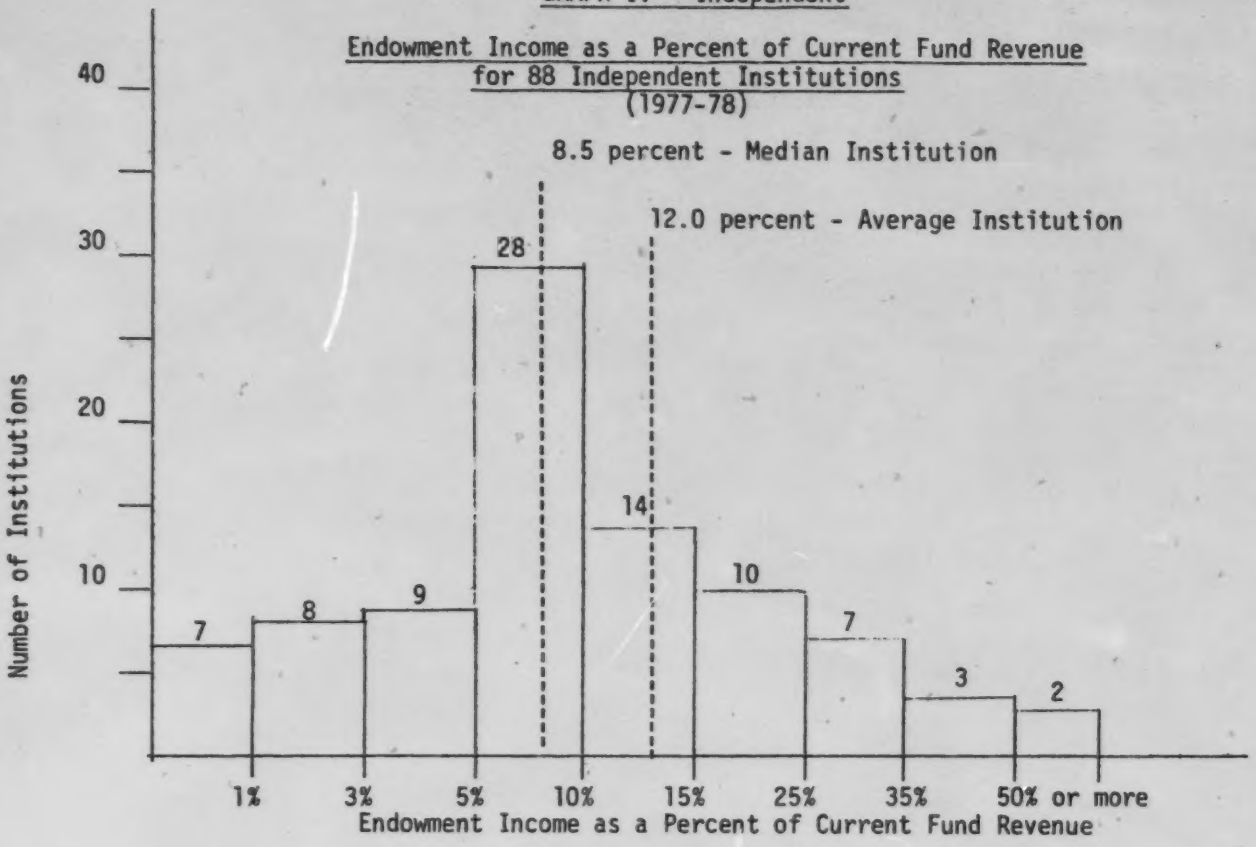
GRAPH III - Public

Current Fund Revenue for 29 Publicly Controlled Institutions
(1977-78)



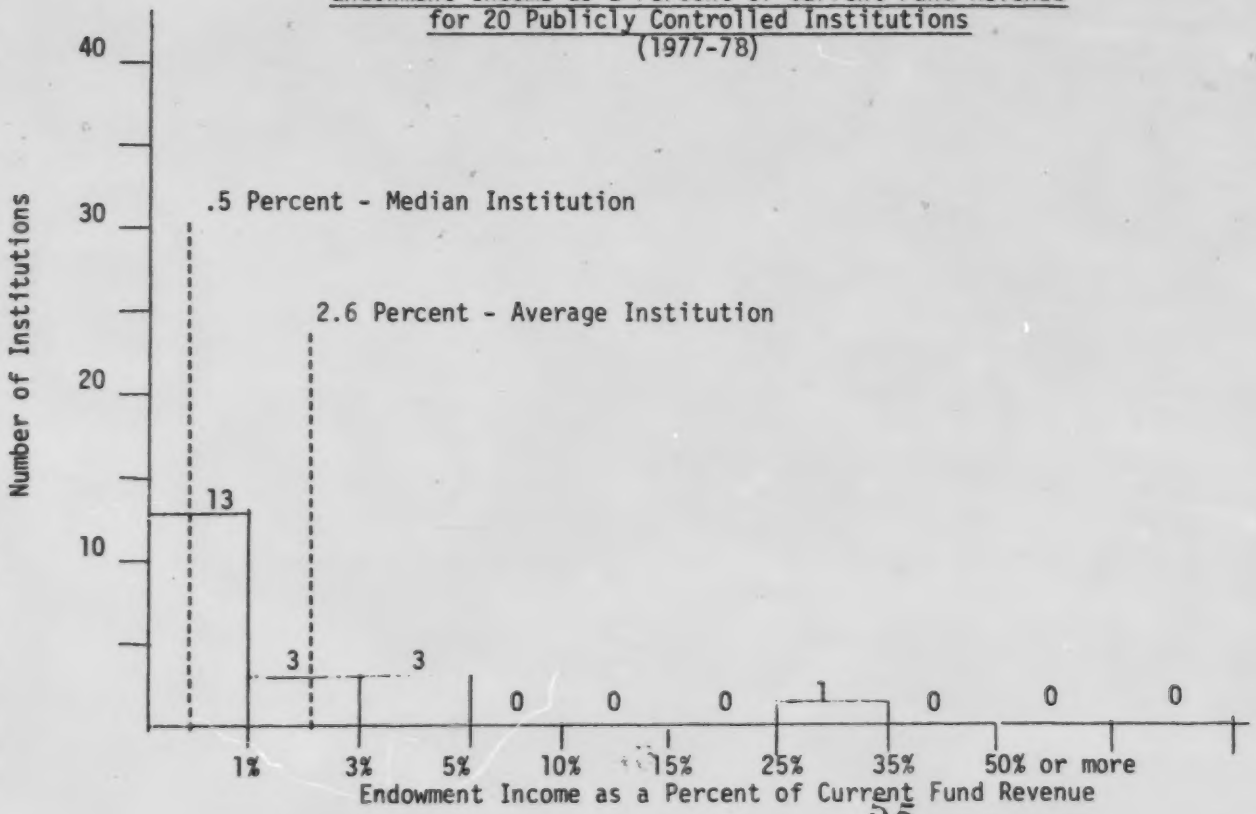
GRAPH IV - Independent

Endowment Income as a Percent of Current Fund Revenue
for 88 Independent Institutions
(1977-78)



GRAPH IV - Public

Endowment Income as a Percent of Current Fund Revenue
for 20 Publicly Controlled Institutions
(1977-78)



The 1978 median budget guideline shows an increase over 1977 of .30 percent, the latter being an increase over 1976 of .28 percent. This appears to be consistent with the shifting of endowments to greater income-producing vehicles and the modest increase in endowment principal as discussed earlier. The 5.6 percent budget guideline is slightly below the 5.7 percent average yield for independent institutions shown in Table 39. One explanation for this may be that a number of institutions are adding income to principal to compensate for the loss of real endowment as a result of inflation and security market performance. Budget guideline figures are net of life income funds; if such funds were included, the median and average responses would decrease by .20 percent.

Endowment Coverage

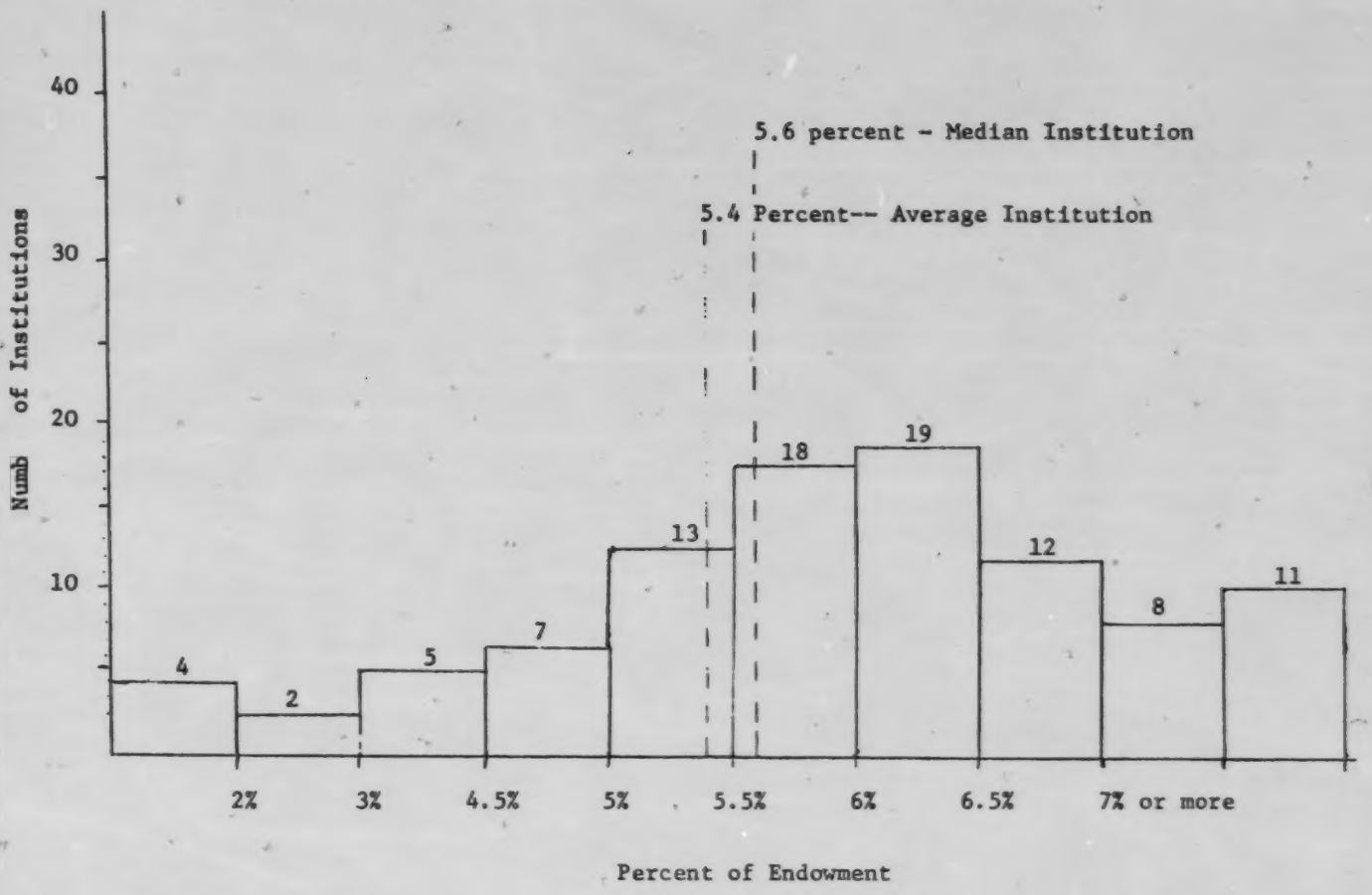
Graph VI shows the distribution of 100 independent institutions in terms of their average endowment as of June 30, 1977, and June 30, 1978, divided by current fund expenditures. For example, for three institutions the average market value of the endowment was 7.5 times greater than current fund expenditures. On the other hand, 11 institutions could not cover 50 percent of their current fund expenditures with their entire endowment. The endowment of the average institution is 2.31 times greater than current fund expenditures. The endowment of the median institution is 1.66 times greater.

In a sense the endowment coverage ratio is both a liquidity test and a wealth factor. It also has certain implications as an "efficiency indicator" in that it measures the ability of an institution to increase endowment and reduce expenditures, while at the same time maintaining or hopefully increasing the quality of education. As a wealth factor this ratio could be very important if an institution attempts to obtain external financing and/or receive a credit rating as a number of institutions have already done.

In terms of a liquidity measure one could say that the median institution could exist using its endowment 1.66 years if it did not receive any current fund revenues to meet its current fund expenditures. This statement is far from correct in that if an institution were unable to meet its expenses and had to rely on endowment to do so, only the quasi-endowment component of total endowment would be readily available. The terms of the true endowment component would have to be reviewed carefully to determine its expendability. For purposes of "real liquidity" a separate measure for quasi-endowment only could be used. It is worth noting that the median response in the 1977 study was 1.83 years and in the 1976 study was 2.01 years. Thus slippage occurred in fiscal 1978 which seems consistent with the reduction in real purchasing power referred to earlier in this report. The 1978 endowment coverage figure excludes life income funds. If life income funds were included the median and average response would increase to 1.70 and 2.40, respectively.

GRAPH V

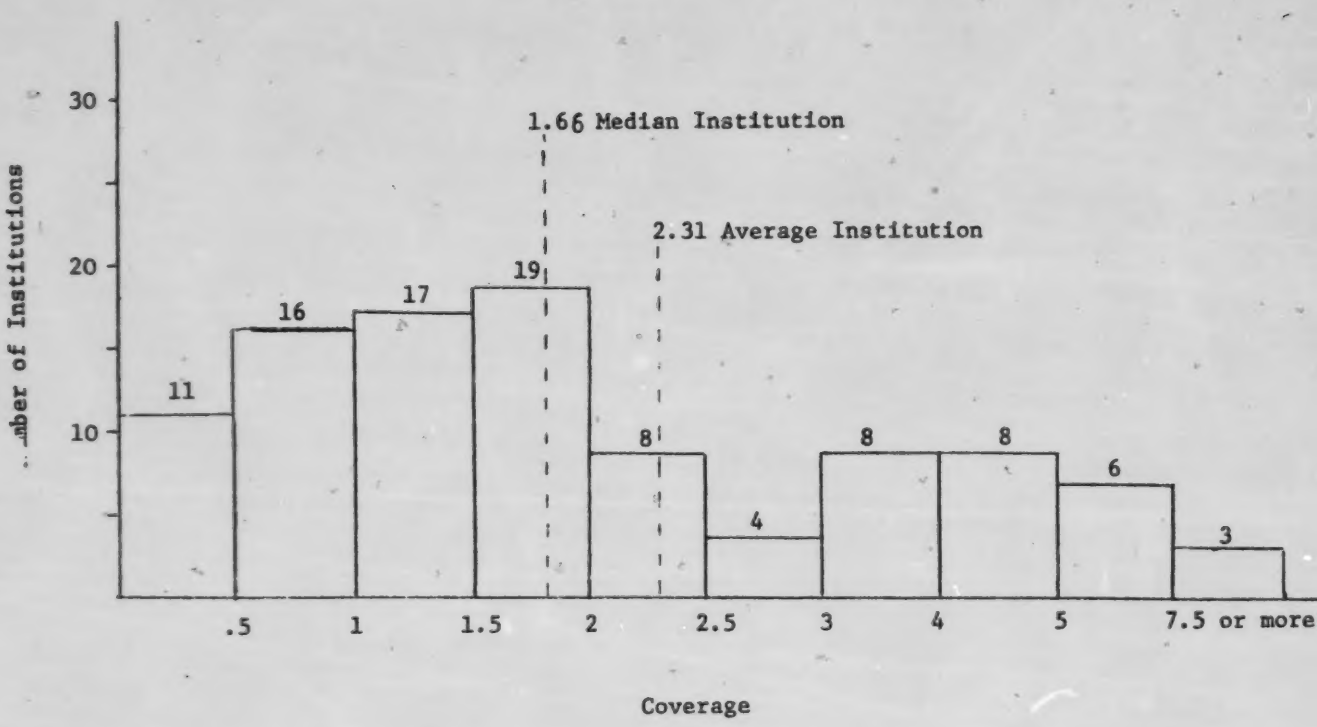
Budget Guideline--Endowment Income Spent as a Percent of Average Market Value of the Endowmnet*of 99 Independent Institutions (1977-78)



*Excluding life income funds.

GRAPH VI

Endowment* Coverage of Current Fund Expenditures
for 100 Independent Institutions
(1977-78)



*Excluding life income funds.

Total Return (Yield and Appreciation)

In terms of applying the total return concept (the spending of yield plus a prudent portion of appreciation) to help meet current year expenses, 138 of the 144 institutions responded as follows:

Table 42

Adoption of Total Return for Budgeting Purposes

	Number Answering	Percent Answering
Adopted Total Return Concept	44	32%
Abandoned Total Return Concept	9	6
Are Considering Adopting Total Return Concept	12	9
Considered and Rejected Adopting Total Return Concept	41	30
Have Not Considered Adopting Total Return Concept	32	23
Total	138	100%

Table 42 indicates that 9 institutions abandoned the total return concept. The following table shows that no additional institutions have adopted total return in the past two years. As a practical application the total return concept is becoming less important to many institutions. This conclusion is drawn from the fact that of the 36 institutions applying total return for budgeting purposes and indicating how much appreciation was spent under their formula, 22 institutions (61 percent) indicated that the yield (interest and dividends) under their formula was sufficient to the extent that no appreciation at all was spent. Of the remaining 14, 3 indicated that appreciation spent was less than 5 percent of total formula revenue, 3 that appreciation represented between 5 to 10 percent, 2 between 10 to 20 percent, 4 between 20 to 30 percent, and 2 between 40 to 50 percent.

Table 43

Total Return Adoption Date

Fiscal Year Adoption	Number Answering	Cumulative Total
Prior to 1969	3	3
1969	7	10
1970	7	17
1971	4	21
1972	6	27
1973	4	31
1974	7	38
1975	0	38
1976	3	41
1977	0	41
1978	0	41

The responses of the 42 institutions applying total return for budgeting showed that 1 (2 percent) applies total return to true endowment only, 7 (17 percent) to quasi-endowment only, and 34 (81 percent) to both true and quasi-endowment. For the 44 institutions reporting their market valuation and indicating the use of total return for budgeting purposes, 41 were privately-supported institutions and 3 were state-supported. Their respective market value size distribution is shown in Table 44.

Table 44

Distribution by Endowment Size of Institution
Which Adopted Total Return

Market Value as of June 30, 1978	Private Institutions	State Institutions	Total Answering	Percent Answering
Over $100 Million	1	10	11	25%
$50 to $100 Million	0	9	9	20
$25 to $50 Million	0	7	7	16
$10 to $25 Million	0	10	10	23
$5 to $10 Million	0	4	4	9
Under $5 Million	2	1	3	7
Total	3	41	44	100%

The responses in Table 44 show that relatively speaking more heavily endowed institutions have had a greater tendency to apply total return for budgeting purposes. However, a significant number of institutions in all market size categories apply total return, indicating that there does not seem to be a particularly strong correlation between endowment size and the adoption of total return for budgeting purposes, nor does there appear to be a correlation between endowment size and fund application (true, quasi-, or both) in using total return for budgeting. That is, of the 7 institutions applying total return to quasi-endowment only, the size of the endowment did not fall into any particular range. The same was true for those 34 institutions applying total return to both true and quasi-endowment.

There also appears to be a relationship between institutions applying the total return concept and endowment income as a percentage of current fund revenue. Institutions applying the total return concept for budgeting had endowments which contributed more to current fund revenues than those that did not as shown in Table 45.

Table 45

Endowment Income as a Percent of Current Fund Revenue
Number of Institutions

Percent	Do Not Apply Total Return Concept	Apply Total Return Concept	Total
Less than 1%	19	1	20
1 - 3	7	4	11
3 - 5	7	5	12
5 - 10	17	11	28
10 - 15	10	4	14
15 - 25	4	6	10
25 - 30	3	5	8
35 - 50	2	1	3
Greater than 50	1	1	2
Total	70	38	108
Mean Average	8.6%	13.9%	10.4%
Median Institution	6.1%	8.9%	7.1%

Total Return Spending Formulas

Of the 44 institutions that adopted total return for budgeting purposes, 34 described their method of application (Exhibit IV). An overview of responses shows that about two-thirds of the institutions determine the amount of total return to be drawn from endowment based on a formula whereby a spending percentage is applied to the endowment market value.

Approximately half of these institutions use a three-year market average to determine the base upon which to apply the spending rate. Approximately one-quarter of these institutions use a five-year average. About one-third of those reporting have modified their formulas within the last three years. These respective formula changes are also shown on Exhibit IV.

Endowment Support

Endowment principal and income per full-time equivalent (FTE) student and per faculty member for independent institutions are shown in Tables 46 through 50. No comparable tables have been produced for public institutions because of the general lack of significance placed on endowments in this area. Endowment support for approximately 70 percent of the public institutions responding was in the lowest category range for independent institutions, and over 85 percent of public institutions responding were in the lowest two categories.

Table 46

Independent Institutions -- Endowment Principal Per FTE Student (1977-78)

Amount	Number of Institutions
Less than $1,000	5
$1000 to $5000	22
$5000 to $10,000	18
$10,000 to $15,000	15
$15,000 to $20,000	8
$20,000 to $25,000	8
$25,000 to $35,000	10
$35,000 to $50,000	5
$50,000 to $75,000	9
Greater than $75,000	1
Total	101
Average Institution	$18,250
Median Institution	$11,600

Table 47

Independent Institutions -- Endowment Income Per FTE Student (1977-78)

Amount	Number of Institutions
Less than $100	8
$100 to $200	12
$200 to $300	9
$300 to $500	12
$500 to $750	13
$750 to $1,000	7
$1,000 to $1,500	11
$1,500 to $2,000	8
$2,000 to $4,000	14
Greater than $4,000	6
Total	100
Average Institution	$1,250
Median Institution	$ 665

Table 48

Independent Institutions -- Endowment Principal
Per Faculty Member
(1977-78)

Amount	Number of Institutions
Less than $25,000	8
$25,000 to $50,000	7
$50,000 to $75,000	9
$75,000 to $100,000	10
$100,000 to $125,000	10
$125,000 to $150,000	0
$150,000 to $200,000	10
$200,000 to $200,000	10
$300,000 to $400,000	12
Greater than $400,000	14
Total	99
Average Institution	$200,100
Median Institution	$136,500

Table 49

Independent Institutions -- Endowment Income
Per Faculty Member
(1977-78)

Amount	Number of Institutions
Less than $1,000	5
$1,000 to $2,000	4
$2,000 to $3,000	11
$3,000 to $4,000	6
$4,000 to $5,000	7
$5,000 to $7,500	15
$7,500 to $10,000	10
$10,000 to $15,000	14
$15,000 to $20,000	8
Greater than $20,000	18
Total	98
Average Institution	$ 11,575
Median Institution	$ 7,750

The five-year record of the average and median responses of independent institutions for endowment principal per FTE student and faculty member is shown in Table 50. The 1978 median figures show about a 10 percent increase in principal per FTE student over the prior year, but only a 1 percent increase per faculty member. This might indicate a rising number of full-time faculty relative to full-time students, or a relative decline of FTE students to faculty. The rise in income per student and faculty member seems about the same, 14 percent. This similar rise is surprising since there was an uneven rise in principal per student and per faculty member, although the average increase between the two was similar. A rise in income itself could be the result of the continued shift to bonds, as noted in Section I of the report, or perhaps of a change in the student-faculty ratio.

Table 50

Five-Year Endowment Record -- Principal and Income per FTE Student and Faculty Member

	Principal per FTE Student		Income per FTE Student	
	Average Response	Median Response	Average Response	Median Response
1978	$ 18,250	$ 11,600	$ 1,250	$ 665
1977	17,725	10,000	950	585
1976	18,650	11,750	915	540
1975	15,550	9,400	800	510
1974	14,800	8,200	800	430
	Principal per Faculty Member		Income per Faculty Member	
1978	$200,100	$136,500	$11,575	$ 7,750
1977	189,000	135,000	10,200	6,800
1976	192,000	138,000	11,000	7,050
1975	162,000	118,000	8,700	6,250
1974	148,000	100,000	8,100	5,100

Investment Management

Thirty institutions indicated that they manage at least 80 percent of their endowments internally. Exhibit V lists these along with the institutions which use outside management and their respective advisors. The exhibit indicates whether the outside manager is retained for stock(S) or bond(B) management or both (S,B). Fifty-three institutions indicated that they have more than one advisor. The 30 internally managed institutions are fairly well distributed among the various size investment pools categories as shown in Table 51.

Table 51

Internal Investment Management

Investment Pool Size	Number in Each Group	Percent of Total
Over $100 Million	10	34%
$50-$100 Million	2	7
$25-$50 Million	4	13
$10-$25 Million	6	20
$5-$10 Million	4	13
Under $5 Million	4	13
Total	30	100%

Custodial Arrangements

Eight institutions indicated that they serve as their own custodian. These institutions are shown in Exhibit VI as are the institutions which use outside custodians and the respective financial institution retained. Of the 132 institutions indicating they use outside custodians, 37 use more than one custodian.

Custodial Fees

Twenty-two institutions indicated that their custodian is also their investment adivsor, and it was not possible to identify separately the cost for each service. Excluding these institutions and the eight institutions which do not use outside custodians, of 114 remaining institutions 103 (94 percent) provided information on custody fees. These fees excluded any custody costs relating to security lending and option writing.

It is difficult to find an accurate measure to compare institutional custody fees. This is because many special arrangements have developed between institutions and their custodians. For example, from the 1975 survey it is known that institutions with longer custodial relations tend to pay less. Custodial fees will also vary because of the different services provided, the amount of transaction activity, the number of different security positions, etc. The foregoing should be taken into consideration when reviewing custodial fees which are compared based on fees paid as a percent of assets under custody.

Table 52 shows that the average institution pays .07 percent of market value of assets under custody. Three institutions pay less than .01 percent, seven others pay .01 to .02 percent, etc. There appears to be a realization of economies of scale as institutions over $50 million pay .038 percent, institutions between $10-$50 million pay .07 percent, and institutions under $10 million pay .209 percent.

Table 52

Custodial Fees as a Percent of Assets under Custody
(1977-78)

Custody Fee	Under $10 Million	$10 to $50 Million	Over $50 Million	All Institutions
Under .01	0	2	1	3
.01 - .02%	1	2	4	7
.02 - .03%	0	2	9	11
.03 - .04%	1	7	5	13
.04 - .05%	0	2	5	7
.05 - .06%	0	2	3	5
.06 - .07%	0	5	0	5
.07 - .08%	0	3	0	3
.08 - .09%	2	2	3	7
.09 - .10%	0	1	2	3
.10 - .12.5%	2	3	1	6
12.5 - .15%	3	3	0	6
.15 - 17.5%	2	1	1	4
17.5 - .20%	1	2	0	3
Over .20%	12	7	1	20
Total	24	44	35	103
Median Responses	.209%	.07%	.038%	.07%

Option Writing

Twenty-three institutions reported they are participating in option writing, six reported they began writing and stopped, and nine presently have this matter under consideration. Of those who started and stopped one began in 1974 and stopped in 1977, four began in 1975 (three stopping in 1976 and one in 1977), and one started and stopped in 1977. Of the remaining institutions about half considered writing options and rejected the idea and about half did not consider writing options.

Table 53

Size of Institutions
Participating in Stock Option Writing at June 30, 1978

Endowment Size	Number Participating	Percent Participating
Over $100 Million	7	31%
$50 to $100 Million	5	22
$25 to $50 Million	4	17
$10 to $25 Million	6	26
$5 to $10 Million	0	0
Under $5 Million	1	4
Total	23	100%

Eight institutions have pilot option writing programs on a fully "covered" basis. Fourteen other institutions write options on their mainstream endowment holdings. One has a pilot program and writes options on its mainstream holdings. The 23 institutions also place various parameters on their approach to the options market, some of which are as follows:

- Write covered options on stocks already in their portfolio.
- Write covered options on up to 5, 10, or 20 percent of their stock portfolio.
- Write covered options on up to 2.5, 3, 5, 10 or 20 percent of their total portfolio.
- Write options on securities we would consider selling anyway.
- Write options on up to half of internally managed holdings, on a maximum of 20 different securities.
- Write options on up to 25 percent of an existing position.
- Segregate $1 million in cash to buy stocks and write options on issues on manager's approved list. No holding can be greater than $150,000.

Only about half of the institutions participating in the option market have been doing so for at least two years as shown in Table 54.

Table 54

Year Institutions Started Writing Options

Year	Number	Cumulative
1974	1	1
1975	3	4
1976	7	11
1977	11	22
1978	1	23

Depository Trust Company - "DTC"

Thirty institutions indicated that they have placed their securities in DTC, and ten have this matter under consideration. As can be seen in Table 55, it is larger institutions which have generated the greater interest in DTC.

Table 55

Use of the Depository Trust Company

Endowment Size	Considering DTC	Assets in DTC
Over $100 Million	5	13
$50 to $100 Million	4	6
$25 to $50 Million	0	7
$10 to $25 Million	1	3
$5 to $10 Million	0	1
Under $5 Million	0	0
Total	10	30

Real Estate Investments

A few institutions indicated that they have a written policy relating to real estate investments, those made solely on "investment merits" providing a reasonable return commensurate with the risk taken. About 25 have a policy but not in written form. The remainder do not have any such policy. A sample of real estate policies is as follows:

Brandeis University - We choose frequently to participate in mortgage financing with other institutions, providing we receive a yield in excess of 10 percent and adequate guarantees.

California Institute of Technology -

1. Properties purchased with endowment funds should be limited to income producing ones, and investments in unimproved properties for speculative purposes are not to be made.
2. Properties purchased should provide safety of principal and reasonable income and should offer some potential for future appreciation.
3. Properties purchased should be virtually "management free" requiring a minimum of internal organization and administrative staff.

Case Western Reserve University - Permissable but policy currently favors securities that are marketable.

Colorado College - Real estate need not be disqualified as an investment.

Cornell College - If total return expectation is equal to or greater than other forms of investing.

Dartmouth College	-	Real estate investments of the unleveraged type may constitute up to 5 percent of the total endowment. In making such investments, both a high current return and potential for appreciation will be stressed.
University of Maryland	-	Non-leveraged real estate up to 15 percent of the endowment is an appropriate investment medium for the long term of a minimum of 10 years. Emphasis should be placed upon investments which produce a high current return coupled with residual land and/or improvement values.

Of those responding which had real estate investments, 22 stated that such assets represented less than 3 percent of total assets, 7 stated assets were between 3 to 5 percent, 4 between 5 and 7½ percent, 5 between 7½ and 10 percent, and 9 greater than 10 percent.

Real Estate Gifts

A few institutions reported that they do not accept real estate gifts to the endowment or to current funds. If such a real estate gift has no investment merit it is usually placed in a "suspense" account until sold, and the proceeds are then placed in an endowment account or a current fund account. If a gift has investment merit, common practice appears to be to retain the gift in the endowment fund if it was made to endowment, or to purchase the gift from current funds if the gift was made to current funds.

EXHIBIT I

1978 NACUBO COMPARATIVE PERFORMANCE STUDY

142 PARTICIPATING INSTITUTIONS (REPRESENTING 164 POOLS)

Academy of the New Chruch
Albion College
Alfred University
Alma College
American University
Amherst College
Arizona State University
Babson College
Baldwin-Wallace College
Barnard College
Baylor College of Medicine
Berea College
Berry College
Boston University
Bowdoin College
Brandeis University
Brown University
Bryn Mawr College
Bucknell University
California Institute of Technology
Carleton College
Carnegie-Mellon University
Carroll College
Case Western Reserve University
Clark University
Coe College
Colby College
Colgate University
College of Wooster
Colorado College
Columbia University
Columbia University, Teachers College
Cooper Union for the Advanc. of Science & Art
Cornell College
Cornell University
Dartmouth College
Denison University
Dickinson College
Doane College
Drake University
Drew University
Eastern Michigan University
Franklin and Marshall College
George Washington University
Georgetown University
Hampton Institute
Harvard University
Hendrix College
Hobart and William Smith Colleges
Hope College
Indiana University
Johns Hopkins University
Kenyon College
Lafayette College
Lehigh University
Macalester College
McGill University

Marquette University
Massachusetts Institute of Technology
Mercer University
Michigan State University
Middlebury College
Monmouth College
Mount Holyoke College
Muhlenberg College
New York University
Northwestern University
Oakland University
Oberlin College
Occidental College
Ohio State University
Ohio Wesleyan University
Oregon State Board of Higher Education
Oregon State University Foundation
Otterbein College
Pennsylvania State University
Philadelphia College of Textiles
Princeton University
Principia College
Reed College
Rensselaer Polytechnic Institute
Rice University
Rutgers, the State University
St. Norbert College
Simmons College
Smith College
Spelman College
Stanford University
State University of N.Y. at Binghamton
State University of N.Y. at Buffalo
Swarthmore College
Sweet Briar College
Syracuse University
Trinity College
Tufts University
University of Akron
University of Alabama
University of Arizona

University of Arkansas
University of California
University of Chicago
University of Connecticut
University of Dayton
University of Delaware
University of Evansville
University of Illinois
University of Maine
University of Maryland
University of Miami
University of Michigan
University of Minnesota
University of Mississippi
University of Missouri
University of Nebraska
University of Nevada
University of North Carolina, Greensboro
University of Notre Dame
University of Oregon Development Fund
University of Pennsylvania
University of Pittsburgh
University of Puget Sound
University of Rochester
University of Santa Clara
University of Tennessee
University of Vermont
University of Virginia
University of Wisconsin
Vassar College
Virginia Military Institute
Wake Forest University
Washburn College
Washington State University
Washington University
Wayne State University
Wellesley College
Wesleyan University
Wheaton College
Whitman College
Whittier College
Willamette University
Williams College
Yale University

Provided Endowment Characteristics but not Performance Data

Agnes Scott College
Medical College of Pennsylvania
Rhode Island School of Design
Rochester Institute of Technology
University of Richmond

EXHIBIT II

1978 COMPARATIVE PERFORMANCE STUDY

CHARACTERISTICS OF PARTICIPATING INVESTMENT POOLS

Pool Characteristics:

1) This is an official pooled investment fund.

2) This is a separately invested fund which was unitized to enable performance to be accurately measured.

3) This is a combination of more than one separately invested unitized fund.

4) This is a pool consisting of only those assets over which management has discretion.

5) This is an official pooled life income fund.

Pool Composition:

1) All invested funds, endowment, quasi-endowment, and funds invested for plant or other purposes but temporarily invested in the pool.

2) Endowment and quasi-endowment.

3) Endowment only.

4) Quasi-endowment only.

Investment Objectives:

1) Total Return - Investment returns are sought from both market appreciation and dividends and interest; current income requirements generally do not dictate the kind of securities that may be held, as primary emphasis is on long-term overall return.

2) Balanced - The pooled funds are invested in such a manner as to minimize investment risks without unduly sacrificing current income or the possibility for some long-term growth. This is usually done by investing a portion of the pool in fixed income securities.

3) Income Orientated - Investment policy is dictated by current income needs; market appreciation is never utilized for current operating purposes, and primary emphasis is on current income maximization.

Market Value:

A. Over $100 Million.
B. $50 to $100 Million.
C. $25 to $50 Million.
D. $10 to $25 Million.
E. $5 to $10 Million.
F. Under $5 Million.

1978 NACUBO COMPARATIVE PERFORMANCE STUDY
CHARACTERISTICS OF PARTICIPATING INVESTMENT POOLS

No.	Code Name	Pool Char	Pool Compos	Invest Object	Mkt Val Size	% Cash 1978	% Bonds 1978	% Stocks 1978	% Miscellaneous Assets 1978	Non-Controllable Assets 1978	6/30/78 # Bonds	6/30/78 # Stocks	1978 Bond Turn-Over %	1978 Stock Turn-Over %
1	E1	1	2	1	E	6	33	58	3	1	N/A	N/A	N/A	N/A
2	E2	1	3	2	D	19	38	40	3	3	30	33	27.1	26.8
3	E3	1	2	1	D	3	31	66	0	0	41	53	0	2.6
4	E4	1	2	1	D	10	23	60	7	0	61	70	0	6.4
5	E5	1	2	1	F	4	12	84	0	3	15	69	14.5	7.5
6	E6	1	2	2	C	9	19	65	7	8	10	49	4.1	9.8
7	E7	1	2	1	F	5	20	75	0	0	10	24	N/A	N/A
8	E8	1	2	2	A	6	23	66	5	1	53	108	63	35
9	E10	1	2	1	D	11	25	64	0	0	61	67	0	6.4
10	F11	1	1	1	A	13	15	72	0	0	74	146	74.4	33.4
11	F12	5	4	3	F	7	43	50	0	0	9	19	0	5.1
12	F13	1	2	3	F	9	42	45	4	1	41	54	N/A	N/A
13	F15	1	1	1	C	0	45	53	2	1	N/A	N/A	N/A	N/A
14	E16	1	2	1	D	13	30	48	9	5	32	39	12.2	11.1
15	F17	1	2	2	C	18	21	55	6	4	26	42	149	13
16	F18	4	1	1	A	5	19	76	0	0	78	42	28.4	1.3
17	E19	1	1	1	C	11	12	78	0	4	3	115	5.1	17.2
18	F20	1	2	2	D	25	21	53	1	0	29	71	21	18
19	F21	1	3	2	E	19	28	52	1	1	25	65	N/A	N/A
20	F22	1	3	3	E	12	51	37	0	1	52	32	8.4	18.9
21	F23	1	2	3	F	11	54	35	0	0	15	30	7.4	9
22	F24	1	2	1	D	6	22	73	0	0	12	24	10.9	42.3
23	E26	1	2	2	D	2	23	74	1	1	13	65	0	5.5
24	E27	1	2	1	P	15	26	57	3	0	28	56	98	28
25	E28	1	2	2	A	23	48	28	1	2	71	127	N/A	N/A
26	E29	1	2	2	A	0	41	56	3	0	33	62	28.4	18.1
27	E30	2	1	2	P	1	42	56	1	1	67	50	N/A	N/A
28	E31	4	1	2	A	7	36	52	5	8	87	182	N/A	N/A
29	E32	1	2	2	C	14	60	26	0	0	87	45	N/A	7
30	F33	4	2	1	P	7	24	69	0	0	46	147	89	87
31	E34	1	2	2	P	10	8	65	17	17	20	144	15.1	11.4
32	F36	4	1	2	A	18	27	53	2	12	24	145	160	93
33	E37	1	2	3	C	13	38	45	3	13	36	85	11.9	20.6
34	E38	1	2	1	A	31	16	52	1	5	0	6	N/A	16.5
35	E39	1	1	1	C	15	18	58	9	3	47	68	1.8	5.1
36	E40	1	2	1	A	18	17	63	2	5	55	150	N/A	N/A
37	E41	3	1	2	C	1	55	44	0	0	75	60	N/A	N/A

No.	Code Name	Pool Char	Pool Compos	Invest Object	Mkt Val Size	% Cash 1978	% Bonds 1978	% Stocks 1978	% Miscellaneous Assets 1978	% Non-Controllable Assets 1978	6/30/78 # Bonds	6/30/78 # Stocks	1978 Bond Turn-Over %	1978 Stock Turn-Over %
38	E42	1	2	1	C	15	7	78	1	9	7	63	20.9	24.4
39	F44	1	3	2	F	11	29	51	9	1	7	30	12	0
40	E46	2	2	2	A	9	19	72	0	12	53	67	8	20
41	E47	5	1	3	D	1	57	30	12	12	62	31	76	28
42	E48	4	2	2	F	1	55	44	0	1	22	20	10	5
43	E49	1	2	1	D	1	27	71	1	7	43	102	N/A	N/A
44	E50	4	2	2	C	10	51	39	0	0	43	25	18.5	99.3
45	E51	1	2	1	C	21	9	54	16	16	7	39	N/A	N/A
46	F52	1	2	2	D	18	34	43	5	4	10	27	35	42
47	E53	1	2	2	C	8	17	71	4	3	30	80	N/A	N/A
48	E54	1	2	1	C	14	13	73	0	1	11	70	7.3	17.5
49	E55	1	4	2	D	29	16	55	0	0	10	35	N/A	N/A
50	E56	1	2	2	B	14	38	48	0	0	62	55	23.8	19.3
51	E57	1	1	2	A	20	27	53	0	0	170	185	N/A	N/A
52	E58	1	2	2	E	44	19	37	0	0	30	26	0	20.9
53	E59	1	2	2	D	41	18	41	0	1	5	22	2.1	14
54	F61	1	2	2	A	33	3	64	0	1	3	173	N/A	N/A
55	E62	1	2	2	E	25	38	36	1	2	14	35	36	27
56	E63	1	2	1	B	21	18	61	0	0	20	129	3	50
57	E64	1	2	1	F	11	50	38	1	1	59	24	146	114
58	E65	1	3	2	F	15	5	80	0	0	5	61	0	0
59	E66	1	1	1	D	5	30	65	0	8	25	46	52	9.6
60	E67	1	2	2	C	4	31	66	0	5	29	70	20	22
61	E68	3	1	1	C	18	25	57	0	3	31	103	36.5	39.7
62	E70	1	2	1	A	6	0	85	9	0	0	41	0	7.9
63	E71	1	2	1	C	20	24	56	0	1	N/A	N/A	N/A	N/A
64	F72	1	1	2	F	13	28	50	8	9	N/A	N/A	N/A	N/A
65	E73	3	2	2	A	16	38	38	8	8	79	143	128.9	30.4
66	E74	1	2	2	E	2	35	63	0	0	81	60	14	18
67	E75	2	1	1	B	11	19	70	0	0	62	63	2.7	12.8
68	E76	1	2	2	F	21	29	50	0	0	9	49	71	82
69	E77	5	2	2	F	0	46	54	0	0	10	45	98	80
70	E78	1	2	2	D	18	62	20	0	0	38	29	25	5
71	E79	5	3	1	F	2	24	74	0	0	1	9	N/A	N/A
72	E81	1	2	2	F	20	41	39	0	0	21	43	N/A	11.6
73	E82	1	2	2	F	0	62	38	0	6	24	18	N/A	N/A
74	E83	1	2	2	F	0	59	41	0	0	16	17	N/A	N/A
75	E84	1	3	2	F	2	30	60	8	1	31	35	31.1	6.5
76	F85	2	2	2	C	1	47	38	14	10	38	46	100.8	24.6
77	E89	1	2	2	C	12	19	41	28	28	20	44	67.5	23.1

No.	Code Name	Pool Char	Pool Compos	Invest Object	Mkt Val Size	% Cash 1978	% Bonds 1978	% Stocks 1978	% Miscel-laneous Invest-ments	% Non-Control-lable Assets 1978	6/30/78 # Bonds	6/30/78 # Stocks	1978 Bond Turn-Over %	1978 Stock Turn-Over %
78	E90	4	2	2	A	4	41	41	14	1	53	48	N/A	N/A
79	E91	1	3	2	F	0	23	76	1	0	22	42	1.9	1.3
80	E92	5	2	2	F	6	39	55	0	0	11	29	58.4	22.1
81	E94	1	2	2	E	2	28	70	0	0	18	41	1.4	3.1
82	E95	1	2	2	D	16	22	60	1	1	24	80	43	63
83	C1	1	3	2	D	14	21	66	0	1	20	35	6.8	7.9
84	C2	1	1	1	C	15	29	55	1	34	5	71	8	53
85	C3	1	3	2	C	4	32	60	4	6	58	62	6.6	1.1
86	C4	1	2	2	D	1	22	77	0	0	55	42	1	7.6
87	C5	2	2	2	E	10	31	56	1	1	22	46	N/A	N/A
88	C6	1	2	2	D	10	30	41	19	19	73	96	31.7	28.5
89	C7	1	2	2	D	8	66	7	19	0	55	28	21.5	66
90	C8	2	4	1	F	8	5	88	0	0	2	33	0	16.9
91	C9	1	2	2	A	10	41	45	4	5	195	127	N/A	N/A
92	C10	1	1	2	F	4	0	96	0	0	0	26	0.3	4.4
93	C11	2	2	2	E	5	38	57	0	0	34	43	6.1	13.5
94	C12	3	2	2	D	5	29	65	1	0	56	112	33.5	21.5
95	C13	2	3	1	E	5	33	62	0	0	47	58	2	55
96	C14	1	2	2	E	19	22	57	2	0	53	57	0	0
97	C15	1	2	1	A	10	23	60	7	1	56	87	50.3	18.9
98	C16	4	4	1	C	5	29	61	6	7	34	61	11.5	0.6
99	C17	1	2	2	C	15	40	44	1	5	64	115	99.6	10.9
100	C18	1	1	1	D	22	17	59	2	1	17	105	N/A	14
101	C19	1	2	1	C	30	28	42	0	1	85	49	12.4	6.5
102	C20	1	2	1	F	53	23	24	0	0	13	28	7.7	5.5
103	C21	1	2	2	D	29	32	35	3	1	35	28	39.3	26.7
104	C22	1	3	2	F	3	35	62	0	0	13	15	5.3	0
105	C23	1	2	2	F	14	48	32	6	8	29	62	86.3	25.6
106	C24	1	2	1	E	7	27	66	0	0	21	41	0	6.9
107	C25	4	2	2	A	14	25	62	0	1	17	116	97	9.3
108	C26	1	2	1	E	0	61	39	0	1	N/A	N/A	145.9	30.8
109	C27	1	2	2	A	12	21	60	7	1	N/A	N/A	46	12.7
110	C29	1	2	2	A	19	24	52	4	7	65	142	66.1	86.6
111	C30	1	3	2	F	20	28	53	0	0	13	33	46	37
112	C31	1	2	1	A	1	32	67	0	0	252	75	9.6	2.9
113	C32	1	2	2	D	15	39	46	1	2	8	2	2	7
114	C33	5	2	3	F	5	50	45	0	1	24	25	0	0.2
115	C34	1	2	1	D	18	18	55	9	9	8	24	0	17
116	C35	1	2	1	D	2	4	46	48	8	5	47	13.7	33.4

No.	Code Name	Pool Char	Pool Compos	Invest Object	Mkt Val Size	% Cash 1978	% Bonds 1978	% Stocks 1978	% Miscel-laneous Invest-ments	% Non-Control-lable Assets 1978	6/30/78 # Bonds	6/30/78 # Stocks	1978 Bond Turn-Over %	1978 Stock Turn-Over %
117	C36	3	2	2	E	16	31	54	0	0	13	32	31.7	1.2
118	C37	3	2	3	F	14	61	26	0	0	13	19	25.6	6.9
119	C38	4	1	2	C	13	24	48	15	0	59	74	0	15
120	C39	1	2	1	C	9	20	71	0	0	31	69	139.2	60.6
121	C40	1	2	2	F	20	1	78	0	1	1	41	0	9
122	C41	1	3	2	D	6	18	70	6	13	33	57	3	13
123	C42	3	2	1	F	14	17	69	1	1	N/A	N/A	N/A	N/A
124	C44	1	2	1	F	22	40	39	0	0	2	2	0	51
125	C47	1	2	2	D	9	40	51	0	0	47	35	15	33
126	C48	1	2	1	D	40	0	61	0	3	0	22	0	72.6
127	C49	1	2	2	D	6	46	47	1	1	N/A	N/A	N/A	5.5
128	C50	1	2	2	F	16	28	56	0	0	19	40	N/A	4.7
129	C51	1	2	2	F	1	37	62	0	1	4	22	N/A	5.1
130	C52	1	2	2	F	21	38	41	0	1	23	40	N/A	7.2
131	C54	1	1	2	A	7	38	39	16	16	N/A	N/A	N/A	N/A
132	C55	1	3	2	A	4	21	75	0	0	60	94	19.5	0.6
133	C56	1	2	2	A	11	21	62	6	1	47	78	49.5	15.3
134	C58	1	2	2	D	8	26	64	0	1	N/A	N/A	N/A	N/A
135	C59	1	2	1	E	26	42	33	0	0	18	40	3	21
136	C60	1	3	2	F	4	39	57	0	1	85	86	N/A	N/A
137	C62	1	2	1	F	17	53	30	0	0	20	20	6.5	67.1
138	C63	1	2	2	D	15	15	69	2	1	32	63	N/A	N/A
139	C64	1	2	2	F	6	48	31	14	0	39	32	11.2	3.5
140	C65	1	3	2	C	16	36	48	0	0	96	75	175.9	11.1
141	C66	1	2	1	D	23	9	68	0	5	6	55	4	63
142	C67	1	2	3	E	26	43	31	0	0	38	45	16.2	16.5
143	C68	3	2	1	F	13	14	73	0	0	2	24	49.5	7.3
144	C69	1	2	2	F	74	0	26	0	1	N/A	5	N/A	N/A
145	C70	1	2	2	E	12	10	55	23	6	4	55	0	3
146	C71	1	2	2	D	2	31	63	4	6	1	133	11.5	5
147	C72	1	3	2	F	10	30	49	11	1	37	48	39	12.9
148	C73	1	3	2	F	4	63	33	0	0	20	20	N/A	N/A
149	C75	1	2	1	F	2	20	78	0	0	6	34	14	8
150	C77	3	2	1	A	5	10	85	0	0	35	143	2.9	5.3

No.	Code Name	Pool Char	Pool Compos	Invest Object	Mkt Val Size	% Cash 1978	% Bonds 1978	% Stocks 1978	% Miscellaneous Investments	% Non-Controllable Assets 1978	6/30/78 # Bonds	6/30/78 # Stocks	1978 Bond Turn-Over %	1978 Stock Turn-Over %
151	C78	1	2	2	E	11	52	38	0	0	14	38	30.4	14.3
152	C79	1	2	2	D	15	44	42	0	0	55	69	20	17.5
153	C80	2	2	2	F	21	37	42	0	0	19	37	3.1	6.8
154	C81	1	2	2	E	5	33	25	25	1	21	26	7.9	15.6
155	C82	3	2	2	C	31	18	51	0	1	N/A	N/A	43	39
156	C84	1	2	2	D	15	48	37	0	0	35	38	0	0
157	C85	1	2	2	E	6	55	38	1	0	27	19	6	115
158	C86	1	2	2	E	32	23	45	0	0	13	45	3	5
159	C88	4	2	2	F	43	23	21	13	9	26	25	49.2	33.2
160	C89	3	2	2	D	13	43	44	0	0	64	47	3.6	19.3
161	C91	1	2	1	F	18	53	29	0	1	14	17	39.3	66.2
162	C92	1	2	2	F	26	27	41	6	10	17	35	4	20.1
163	C93	1	2	1	D	2	24	74	0	0	12	40	9.7	0
164	C94	1	2	2	D	19	40	16	25	25	125	40	32	16
# ans		164	164	164	164	164	164	164	164	164	152	153	125	133
mean average						12.9	30.2	53.6	3.4		35	58	29.7	22.7
weighted average						13.5	24.5	59	3.1		26*	46*	13.7*	14.33*

*Median Response

EXHIBIT III

DETAILED PERFORMANCE SUMMARY

AVERAGE ANNUAL TOTAL RETURN

This exhibit shows in detail the average annual total return performance of all investment pools and various bond and equity indices for the one-, three-, five-, and ten-year periods ending June 20, 1978. For example, investment pool C10 for the one-year period had a return of 14.22 percent which was the highest return among all pools and indices in the 1978 Comparative Performance Study. This pool had an average annual return of 4.2 percent for the three-year period and ranked one hundred and twenty-third, etc. Performance of pools is also ranked based on investment objective and investment size categories. Lastly, beta and efficiency measure ranking are shown for those pools with at least five years' data. The table below shows the number of pools participating based on the various groupings.

Number of Pools Participating

Grouping - Ending June 30, 1978	1 Year	3 Years	5 Years	10 Years
Page 72 - All Pools	164	158	148	94
Page 76 - Total Return	54	52	50	33
Page 78 - Balanced or Income Oriented	110	106	98	61
Page 81 - Over $50 Million	39	39	39	31
Page 82 - $10-$50 Million	66	64	59	44
Page 84 - Under $10 Million	59	55	50	19

Page 86 - Beta and Efficiency Measures were calculated for five and ten years ending June 30, 1978. Participation was 148 and 94, respectively.

ALL POOLS
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YE. RETURN
1	C10	14.22 %	123	4.2%	N/A	%	N/A	%
2	C27	13.77	3	13.05	14	7.11	4	6.31
3	C44	13.76	10	10.26	2	10.14	65	3.05
4	E49	12.74	7	10.88	92	2.79	89	2.19
5	C54	12.33	53	7.16	37	5.02	N/A	
6	C70	10.99	11	10.11	24	5.88	N/A	
7	C38	10.54	24	8.73	21	6.35	1	7.26
8	E54	10.32	29	8.34	95	2.53	79	2.56
9	C85	9.74	5	11.7	27	5.63	N/A	
10	C12	9.07	9	10.34	32	5.37	17	5.02
11	C63	9.04	34	8.04	65	4.01	46	3.86
12	C41	8.47	4	12.69	16	6.95	7	5.84
13	C35	8.28	14	9.61	5	9.32	N/A	
14	E31	8.23	2	14.02	4	9.66	N/A	
15	C60	8.16	55	7.05	23	5.98	18	4.94
16	E50	7.73	124	4.02	149	-1.13	92	2.01
17	E70	7.33	161	-1.31	153	-5.38	96	0.73
18	E62	6.88	31	8.31	51	4.51	N/A	
19	C92	6.52	38	7.78	75	3.67	N/A	
20	C34	6.48	125	4.02	120	1.25	N/A	
21	C13	6.26	52	7.29	11	7.43	N/A	
22	C5	6.18	71	6.27	48	4.66	9	5.54
23	C1	5.76	16	9.46	N/A		N/A	
24	C86	5.47	21	9	12	7.28	N/A	
25	E21	5.38	96	5.18	105	2.21	50	3.63
26	E41	5.29	23	8.77	31	5.38	47	3.81
27	E5	5.24	87	5.58	116	1.36	49	3.64
28	C55	5.22	28	8.55	22	6.22	N/A	
29	E32	4.79	17	9.24	40	4.89	41	4.01
30	C56	4.67	27	8.57	50	4.61	21	4.83
31	E61	4.6	8	10.56	8	8.3	6	6.01
32	E19	4.58	51	7.29	77	3.52	67	2.96
33	C17	4.44	99	5.01	106	2.16	88	2.24
34	E51	4.43	137	3.35	78	3.45	32	4.31
35	E1	4.42	69	6.41	123	1.12	91	2.06
36	E82	4.39	36	7.89	59	4.2	N/A	
37	C26	4.19	63	6.76	61	4.19	28	4.5
38	E33	4.12	154	1.59	112	1.65	N/A	
39	C18	4.11	6	10.95	6	9.29	2	7.14
40	C65	4.05	39	7.75	10	7.58	10	5.52
41	E63	4.04	142	2.92	144	-0.71	53	3.55
42	C66	4.04	64	6.74	N/A		N/A	
43	F53	4.02	25	8.58	30	5.46	19	4.89
44	E8	3.91	73	6.25	55	4.31	54	3.55
	E68	3.77	113	4.57	100	2.37	95	1.45

ALL INVESTMENT POOLS
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
46	E64	3.74%	104	4.81 %	134	0.1 %	N/A	%
47	E83	3.73	59	6.95	111	1.69	N/A	
48	E15	3.59	72	6.26	122	1.14	66	2.96
49	C24	3.49	12	9.93	7	8.98	N/A	
50	E3	3.46	107	4.68	87	3.08	29	4.49
51	C14	3.39	54	7.07	64	4.13	37	4.12
52	C91	3.37	156	1.49	85	3.12	N/A	
53	C48	3.37	145	2.58	145	-0.73	N/A	
54	C51	3.24	82	5.73	74	3.68	N/A	
55	C88	3.15	102	4.87	62	4.17	N/A	
56	E28	3.12	117	4.43	93	2.72	73	2.86
57	C69	3.12	42	7.59	15	7.1	N/A	
58	C82	3.1	80	5.79	135	0.06	86	2.37
59	C39	3.07	101	4.89	114	1.37	N/A	
60	E4	2.98	139	3.06	143	-0.3	74	2.86
61	E36	2.98	121	4.27	71	3.82	69	2.9
62	C42	2.98	133	3.55	128	0.56	78	2.64
63	E24	2.97	13	9.71	13	7.16	N/A	
64	E2	2.96	91	5.43	119	1.29	68	2.93
65	C52	2.9	66	6.57	45	4.71	36	4.14
66	C81	2.88	76	6.07	138	-0.15	42	3.96
67	C11	2.82	111	4.58	103	2.23	45	3.86
68	E95	2.79	98	5.13	70	3.86	56	3.29
69	C89	2.78	68	6.43	N/A		N/A	
70	C2	2.73	88	5.57	49	4.64	27	4.52
71	E11	2.62	86	5.59	108	1.97	34	4.23
72	E55	2.53	150	2.01	150	-1.15	N/A	
73	E73	2.43	46	7.5	84	3.23	52	3.55
74	C7	2.41	26	8.57	N/A		N/A	
75	E42	2.36	N/A		N/A		N/A	
76	C64	2.34	43	7.57	34	5.34	12	5.29
77	E16	2.33	90	5.5	46	4.69	39	4.05
78	C15	2.25	58	6.98	69	3.91	71	2.88
79	E59	2.23	62	6.78	29	5.5	77	2.65
80	E39	2.16	135	3.38	130	0.41	85	2.37
81	E18	2.11	151	1.99	127	0.68	70	2.89
82	E72	2.03	48	7.41	54	4.41	43	3.94
83	C59	1.94	120	4.27	28	5.54	N/A	
84	E34	1.94	100	4.95	124	1.03	80	2.54
85	E30	1.89	110	4.6	117	1.32	57	3.29
86	E67	1.85	45	7.53	53	4.43	15	5.1
87	C75	1.82	49	7.38	109	1.86	61	3.22
88	C6	1.78	116	4.49	97	2.51	58	3.26
89	C9	1.74	97	5.13	73	3.7	36	4.08
90	C67	1.72	37	7.83	82	3.31	N/A	
91	E91	1.7	122	4.21	115	1.37	N/A	
92	E46	1.7	140	3	125	1.01	N/A	
93	E85	1.64	50	7.31	N/A		N/A	
94	C79	1.56	65	6.62	57	4.25	N/A	
95	E20	1.49	77	6.04	42	4.82	31	4.36
96	E58	1.47	47	7.49	52	4.45	N/A	
97	C49	1.47	92	5.35	139	-0.16	82	2.45
98	C77	1.45	22	8.83	18	6.63	8	5.82
99	C72	1.38	15	9.6	9	7.6	3	6.88
100	E66	1.37	159	0.32	140	-0.18	N/A	

ALL INVESTMENT POOLS
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
		%		%		%		%
101	C50	1.36	127	3.83	86	3.1	N/A	
102	E56	1.33	134	3.54	121	1.21	N/A	
103	C62	1.3	33	8.09	35	5.13	N/A	
104	E89	1.27	93	5.34	63	4.16	N/A	
105	E76	1.22	138	3.07	101	2.32	N/A	
106	E38	1.18	32	8.17	44	4.73	26	4.6
107	E10	1.17	147	2.23	152	-1.31	87	2.36
108	E29	1.1	60	6.88	81	3.34	97	0.54
109	E22	1.02	18	9.17	25	5.87	14	5.24
110	E90	0.94	78	6.03	102	2.3	N/A	
111	C78	0.91	144	2.79	137	-0.11	81	2.51
112	C23	0.89	81	5.77	76	3.65	40	4.04
113	E57	0.87	75	6.08	68	3.91	N/A	
114	E7	0.86	158	1.42	141	-0.21	N/A	
115	C30	0.76	61	6.87	33	5.37	48	3.68
116	E26	0.73	85	5.67	129	0.47	90	2.07
117	C22	0.69	44	7.54	60	4.2	16	5.06
118	C71	0.67	149	2.18	94	2.62	N/A	
119	E17	0.59	57	6.99	72	3.74	13	5.24
120	C94	0.56	56	7.03	20	6.46	N/A	
121	C93	0.48	N/A		N/A		N/A	
122	C80	0.41	131	3.61	98	2.42	94	1.73
123	C19	0.37	119	4.34	89	2.92	75	2.83
124	E77	0.35	89	5.55	104	2.22	N/A	
125	LEH-KUHN	0.33	19	9.07	19	6.57	N/A	
126	E6	0.31	143	2.86	107	2.15	35	4.17
127	E84	0.28	67	6.47	118	1.3	N/A	
128	C36	0.17	129	3.67	N/A		N/A	
129	C58	0.13	148	2.21	146	-0.9	84	2.44
130	E40	0.12	103	4.85	67	3.98	83	2.45
131	C16	0.12	108	4.62	88	2.97	N/A	
132	C4	0.11	20	9.04	56	4.3	N/A	
133	C84	0.1	114	4.54	96	2.52	25	4.69
134	E13	0.1	94	5.27	47	4.66	N/A	
135	C31	0.06	83	5.69	66	4.01	30	4.45
136	C68	-0.04	162	-1.66	N/A		N/A	
137	SP-IND	-0.1	130	3.67	110	1.82	62	3.22
138	SP500	-0.16	115	4.51	99	2.38	55	3.31
139	C32	-0.22	41	7.65	58	4.25	20	4.88
140	C25	-0.37	112	4.58	43	4.79	24	4.74
141	C29	-0.43	128	3.78	83	3.29	63	3.12
142	C37	-0.54	105	4.71	N/A		N/A	
143	C47	-0.7	84	5.68	39	4.94	23	4.79
144	C73	-0.75	N/A		N/A		N/A	
145	E71	-0.8	95	5.27	91	2.8	64	3.08
146	E37	-0.93	74	6.08	38	5	N/A	
147	SALOMON	-0.97	40	7.72	26	5.78	N/A	
148	E27	-1	141	2.95	126	0.85	51	3.56
149	E23	-1.27	106	4.69	136	-0.06	N/A	
150	E52	-1.47	132	3.59	79	3.39	72	2.88
151	E48	-1.54	153	1.84	148	-1.06	N/A	
152	E81	-1.6	118	4.39	132	0.26	N/A	
153	E92	-1.63	30	8.31	17	6.94	N/A	
154	C20	-1.68	160	-0.6	131	0.39	76	2.72
155	E47	-1.7	152	1.97	142	-0.3	N/A	

ALL INVESTMENT POOLS
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
156	E74	-1.72 %	126	3.84 %	N/A	%	N/A	%
157	C3	-1.79	109	4.62	80	3.37	33	4.27
158	C33	-2.04	N/A		N/A		N/A	
159	E65	-2.04	79	5.89	36	5.13	44	3.94
160	C8	-2.26	136	3.35	113	1.6	N/A	
161	F79	-2.68	163	-2.37	151	-1.23	N/A	
162	E94	-2.82	N/A		N/A		N/A	
163	C21	-2.95	155	1.52	147	-0.94	93	1.77
164	E12	-4.55	N/A		N/A		N/A	
165	E75	-4.72	1	15.27	1	10.3	11	5.41
166	F44	-4.78	157	1.49	133	0.25	59	3.24
167	D-JONES	-5.81	146	2.23	90	2.82	60	3.24
168	F78	-6.75	35	7.91	41	4.82	22	4.81
169	C40	-7.04	70	6.31	3	9.87	5	6.24
TOTAL POOLS (AVERAGE RETURN)								
164		2.49%	158	5.90%	148	3.40%	94	3.78%

POOLS WITH A
TOTAL RETURN INVESTMENT OBJECTIVE
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
1	C44	13.76%	4	10.26%	2	10.14%	20	3.05%
2	F49	12.74	3	10.88	28	2.79	33	2.19
3	E54	10.32	10	8.34	29	2.53	29	2.56
4	C35	8.28	7	9.61	3	9.32	N/A	
5	F70	7.33	55	-1.31	55	-5.38	36	0.73
6	C34	6.48	37	4.02	39	1.25	N/A	
7	CI3	6.26	15	7.29	6	7.43	N/A	
8	F5	5.24	24	5.58	38	1.36	12	3.64
9	E19	4.58	16	7.29	20	3.5	22	2.96
10	E51	4.43	41	3.35	21	3.05	9	4.31
11	F1	4.42	20	6.41	41	1.12	34	2.06
12	C26	4.19	18	6.76	16	4.19	6	4.5
13	F33	4.12	50	1.59	35	1.65	N/A	
14	C18	4.11	2	10.95	4	9.29	1	7.14
15	E63	4.04	45	2.92	51	-0.71	14	3.55
16	C66	4.04	19	6.74	N/A		N/A	
17	E68	3.77	33	4.57	31	2.37	35	1.45
18	E64	3.74	30	4.81	47	0.1	N/A	
19	E15	3.59	21	6.26	40	1.14	21	2.96
20	C24	3.49	5	9.93	5	8.98	N/A	
21	E3	3.46	31	4.68	23	3.08	7	4.49
22	C48	3.37	46	2.58	52	-0.73	N/A	
23	C91	3.37	51	1.49	22	3.12	N/A	
24	C39	3.07	28	4.89	37	1.37	N/A	
25	F4	2.98	43	3.06	50	-0.3	25	2.86
26	C42	2.98	39	3.55	44	0.56	28	2.64
27	F24	2.97	6	9.71	7	7.16	N/A	
28	C2	2.73	25	5.57	15	4.64	5	4.52
29	E11	2.62	23	5.59	32	1.97	10	4.23
30	F42	2.36	N/A		N/A		N/A	
31	F16	2.33	26	5.5	14	4.69	11	4.05
32	C15	2.25	17	6.98	19	3.91	24	2.88
33	E39	2.16	40	3.38	45	0.41	31	2.37
34	E18	2.11	49	1.99	43	0.68	23	2.89
35	C59	1.94	36	4.27	11	5.54	N/A	
36	C75	1.82	14	7.38	33	1.86	17	3.22
37	C77	1.45	9	8.83	8	6.63	2	5.82
38	E66	1.37	53	0.32	48	-0.18	N/A	
39	C62	1.3	12	8.09	12	5.13	N/A	
40	E38	1.18	11	8.17	13	4.73	4	4.6
41	E10	1.17	48	2.23	54	-1.31	32	2.36
42	E7	0.86	52	1.42	49	-0.21	N/A	
43	C93	0.48	N/A		N/A		N/A	
44	C19	0.37	35	4.34	25	2.92	26	2.83
45	LEH-KUHN	0.33	8	9.07	9	6.57	N/A	

POOLS WITH A
TOTAL RETURN INVESTMENT OBJECTIVE
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
46	E40	0.12%	29	4.85 %	18	3.98 %	30	2.45 %
47	C16	0.12	32	4.62	24	2.97	N/A	
48	C31	0.06	22	5.69	17	4.01	8	4.45
49	C68	-0.04	56	-1.66	N/A		N/A	
50	SP-IND	-0.1	38	3.67	34	1.82	18	3.22
51	SP500	-0.16	34	4.51	30	2.38	15	3.31
52	E71	-0.8	27	5.27	27	2.8	19	3.08
53	SALOMON	-0.97	13	7.72	10	5.78	N/A	
54	E27	-1	44	2.95	42	0.85	13	3.56
55	C20	-1.68	54	-0.6	46	0.39	27	2.72
56	C8	-2.26	42	3.35	36	1.6	N/A	
57	E79	-2.68	57	-2.37	53	-1.23	N/A	
58	E75	-4.72	1	15.27	1	10.3	3	5.41
59	D-JONES	-5.81	47	2.23	26	2.82	16	3.24
TOTAL POOLS (AVERAGE RETURN)								
54		2.90%	52	5.15%	50	2.92%	33	3.41%

POOLS WITH A
BALANCED OR INCOME INVESTMENT OBJECTIVE
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
1	C10	14.22%	90	4.2 %	N/A	%	N/A	%
2	C27	13.77	2	13.05	7	7.11	3	6.31
3	C54	12.33	39	7.16	27	5.02	N/A	
4	C70	10.99	7	10.11	16	5.88	N/A	
5	C38	10.54	16	8.73	13	6.35	1	7.26
6	C85	9.74	4	11.7	19	5.63	N/A	
7	C12	9.07	6	10.34	23	5.37	14	5.02
8	C63	9.04	23	8.04	51	4.01	34	3.86
9	C41	8.47	3	12.69	9	6.95	6	5.84
10	E31	8.23	1	14.02	2	9.66	N/A	
11	C60	8.16	41	7.05	15	5.98	15	4.94
12	E50	7.73	91	4.02	102	-1.13	61	2.01
13	E62	6.88	21	8.31	38	4.51	N/A	
14	C92	6.52	27	7.78	58	3.67	N/A	
15	C5	6.18	53	6.27	36	4.66	7	5.54
16	C1	5.76	9	9.46	N/A		N/A	
17	C86	5.47	14	9	6	7.28	N/A	
18	E21	5.38	71	5.18	78	2.21	38	3.63
19	E41	5.29	15	8.77	22	5.38	36	3.81
20	C55	5.22	20	8.55	14	6.22	N/A	
21	E32	4.79	10	9.24	30	4.89	30	4.01
22	C56	4.67	18	8.57	37	4.61	18	4.83
23	E61	4.6	5	10.56	3	8.3	5	6.01
24	C17	4.44	74	5.01	79	2.16	59	2.24
25	E82	4.39	25	7.89	46	4.2	N/A	
26	C65	4.05	28	7.75	5	7.56	8	5.52
27	E53	4.02	17	8.58	21	5.46	16	4.89
28	E8	3.91	54	6.25	42	4.31	39	3.55
29	E83	3.73	44	6.95	82	1.69	N/A	
30	C14	3.39	40	7.07	50	4.13	27	4.12
31	C51	3.24	63	5.73	57	3.68	N/A	
32	C88	3.15	76	4.87	48	4.17	N/A	
33	C69	3.12	31	7.59	8	7.1	N/A	
34	E28	3.12	86	4.43	68	2.72	52	2.86
35	C82	3.1	61	5.79	93	0.06	58	2.37
36	E36	2.98	88	4.27	54	3.82	50	2.9
37	E2	2.96	67	5.43	86	1.29	49	2.93
38	C52	2.9	49	6.57	34	4.71	26	4.14
39	C81	2.88	57	6.07	96	-0.15	31	3.96
40	C11	2.82	82	4.58	76	2.23	35	3.86
41	E95	2.79	73	5.13	53	3.86	43	3.29
42	C89	2.78	51	6.43	N/A		N/A	
43	E55	2.53	107	2.01	103	-1.15	N/A	
44	E73	2.43	35	7.5	65	3.23	40	3.55
45	C7	2.41	19	8.57	N/A		N/A	

POOLS WITH A
BALANCED OR INCOME INVESTMENT OBJECTIVE
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
46	C64	2.34%	32	7.57 %	25	5.34 %	9	5.29 %
47	E59	2.23	47	6.78	20	5.5	53	2.65
48	E72	2.03	37	7.41	41	4.41	32	3.94
49	E34	1.94	75	4.95	88	1.03	54	2.54
50	E30	1.89	80	4.6	84	1.32	42	3.29
51	E67	1.85	34	7.53	40	4.43	12	5.1
52	C6	1.78	85	4.49	71	2.51	44	3.26
53	C9	1.74	72	5.13	56	3.7	28	4.08
54	C67	1.72	26	7.83	63	3.31	N/A	
55	E91	1.7	89	4.21	83	1.37	N/A	
56	E46	1.7	101	3	89	1.01	N/A	
57	E85	1.64	38	7.31	N/A		N/A	
58	C79	1.56	48	6.62	44	4.25	N/A	
59	E20	1.49	58	6.04	32	4.82	23	4.36
60	E58	1.47	36	7.49	39	4.45	N/A	
61	C49	1.47	68	5.35	97	-0.16	56	2.45
62	C72	1.38	8	9.6	4	7.6	2	6.88
63	C50	1.36	93	3.83	66	3.1	N/A	
64	E56	1.33	99	3.54	87	1.21	N/A	
65	E89	1.27	69	5.34	49	4.16	N/A	
66	E76	1.22	100	3.07	74	2.32	N/A	
67	E29	1.1	45	6.88	62	3.34	64	0.54
68	E22	1.02	11	9.17	17	5.87	10	5.24
69	E90	0.94	59	6.03	75	2.3	N/A	
70	C78	0.91	103	2.79	95	-0.11	55	2.51
71	C23	0.89	62	5.77	59	3.65	29	4.04
72	E57	0.87	56	6.08	52	3.91	N/A	
73	C30	0.76	46	6.87	24	5.37	37	3.68
74	E26	0.73	65	5.67	90	0.47	60	2.07
75	C22	0.69	33	7.54	47	4.2	13	5.06
76	C71	0.67	106	2.18	69	2.62	N/A	
77	E17	0.59	43	6.99	55	3.74	11	5.24
78	C94	0.56	42	7.03	12	6.46	N/A	
79	C80	0.41	97	3.61	72	2.42	63	1.73
80	E77	0.35	66	5.55	77	2.22	N/A	
81	LEH-KUHN	0.33	12	9.07	11	6.57	N/A	
82	E6	0.31	102	2.86	80	2.15	25	4.17
83	E84	0.28	50	6.47	85	1.3	N/A	
84	C36	0.17	95	3.67	N/A		N/A	
85	C58	0.13	105	2.21	99	-0.9	57	2.44
86	C4	0.11	13	9.04	43	4.3	N/A	
87	C84	0.1	83	4.54	70	2.52	22	4.69
88	E13	0.1	70	5.27	35	4.66	N/A	
89	SP-IND	-0.1	96	3.67	81	1.82	47	3.22
90	SP500	-0.16	84	4.51	73	2.38	41	3.31
91	C32	-0.22	30	7.65	45	4.25	17	4.88
92	C25	-0.37	81	4.58	33	4.79	21	4.74
93	C29	-0.43	94	3.78	64	3.29	48	3.12
94	C37	-0.54	77	4.71	N/A		N/A	
95	C47	-0.7	64	5.68	29	4.94	20	4.79

POOLS WITH A
BALANCED OR INCOME INVESTMENT OBJECTIVE
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
96	C73	-0.75 %	N/A	%	N/A	%	N/A	%
97	E37	-0.93	55	6.08	28	5	N/A	
98	SALOMON	-0.97	29	7.72	18	5.78	N/A	
99	E23	-1.27	78	4.69	94	-0.06	N/A	
100	E52	-1.47	98	3.59	60	3.39	51	2.88
101	E48	-1.54	109	1.84	101	-1.06	N/A	
102	F81	-1.6	87	4.39	91	0.26	N/A	
103	E92	-1.63	22	8.31	10	6.94	N/A	
104	E47	-1.7	108	1.97	98	-0.3	N/A	
105	E74	-1.72	92	3.84	N/A		N/A	
106	C3	-1.79	79	4.62	61	3.37	24	4.27
107	C33	-2.04	N/A		N/A		N/A	
108	E65	-2.04	60	5.89	26	5.13	33	3.94
109	F94	-2.82	N/A		N/A		N/A	
110	C21	-2.95	110	1.52	100	-0.94	62	1.77
111	E12	-4.55	N/A		N/A		N/A	
112	F44	-4.78	111	1.49	92	0.25	45	3.24
113	D-JONES	-5.81	104	2.23	67	2.82	46	3.24
114	E78	-6.75	24	7.91	31	4.82	19	4.81
115	C40	-7.04	52	6.31	1	9.87	4	6.24
TOTAL POOLS (AVERAGE RETURN)								
110		2.29%	106	6.26%	98	3.65%	61	3.99%

INVESTMENT POOLS OVER $50 MILLION
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
1	C27	13.77%	3	13.05%	5	7.11%	2	6.31%
2	C54	12.33	14	7.16	11	5.02	N/A	
3	E31	8.23	2	14.02	2	9.66	N/A	
4	C60	8.16	15	7.05	9	5.98	6	4.94
5	E70	7.33	44	-1.31	44	-5.38	33	0.73
6	E21	5.38	25	5.18	30	2.21	15	3.63
7	E5	5.24	24	5.58	34	1.36	14	3.64
8	C55	5.22	9	8.55	8	6.22	N/A	
9	C56	4.67	8	8.57	14	4.61	7	4.83
10	E61	4.6	4	10.56	3	8.3	3	6.01
11	E1	4.42	18	6.41	37	1.12	32	2.06
12	E33	4.12	43	1.59	33	1.65	N/A	
13	E63	4.04	40	2.92	43	-0.71	17	3.55
14	E8	3.91	19	6.25	16	4.31	18	3.55
15	E28	3.12	32	4.43	27	2.72	28	2.86
16	E36	2.98	33	4.27	21	3.82	25	2.9
17	C42	2.98	36	3.55	42	0.56	29	2.64
18	E11	2.62	23	5.59	31	1.97	11	4.23
19	E73	2.43	12	7.5	25	3.23	19	3.55
20	C15	2.25	16	6.98	19	3.91	27	2.88
21	E18	2.11	42	1.99	41	0.68	26	2.89
22	E72	2.03	13	7.41	15	4.41	13	3.94
23	E34	1.94	27	4.95	38	1.03	30	2.54
24	E30	1.89	29	4.6	35	1.32	21	3.29
25	C9	1.74	26	5.13	22	3.7	12	4.08
26	E46	1.7	38	3	39	1.01	N/A	
27	C77	1.45	7	8.83	6	6.63	4	5.82
28	C72	1.38	5	9.6	4	7.6	1	6.88
29	E56	1.33	37	3.54	36	1.21	N/A	
30	E38	1.18	10	8.17	13	4.73	9	4.6
31	E29	1.1	17	6.86	23	3.34	34	0.54
32	E90	0.94	21	6.03	29	2.3	N/A	
33	E57	0.87	20	6.08	20	3.91	N/A	
34	LEH-KUHN	0.33	6	9.07	7	6.57	N/A	
35	E40	0.12	28	4.65	18	3.98	31	2.45
36	C31	0.06	22	5.69	17	4.01	10	4.45
37	SP-IND	-0.1	35	3.67	32	1.82	23	3.22
38	SP500	-0.16	31	4.51	28	2.38	20	3.31
39	C25	-0.37	30	4.58	12	4.79	8	4.74
40	C29	-0.43	34	3.78	24	3.29	24	3.12
41	SALOMON	-0.97	11	7.72	10	5.78	N/A	
42	E27	-1	39	2.95	40	0.85	16	3.56
43	E75	-4.72	1	15.27	1	10.3	5	5.41
44	D-JONES	-5.81	41	2.23	26	2.82	22	3.24
TOTAL POOLS (AVERAGE RETURN)								
39		3.11%	39	6.19%	39	3.51%	31	3.76%

INVESTMENT POOLS $10 - $50 MILLION
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
1	E49	12.74 %	3	10.88%	38	2.79 %	43	2.19 %
2	C38	10.54	12	8.73	8	6.35	1	7.26
3	E54	10.32	15	8.34	40	2.53	36	2.56
4	C12	9.07	4	10.34	13	5.37	7	5.02
5	C63	9.04	16	8.04	26	4.01	21	3.86
6	C41	8.47	1	12.69	5	6.95	3	5.84
7	C35	8.28	6	9.61	1	9.32	N/A	
8	E50	7.73	54	4.02	62	-1.13	45	2.01
9	C34	6.48	53	4.02	50	1.25	N/A	
10	C1	5.76	7	9.46	N/A		N/A	
11	E41	5.29	11	8.77	12	5.38	22	3.81
12	E32	4.79	8	9.24	16	4.89	20	4.01
13	E19	4.58	23	7.29	29	3.52	30	2.96
14	C17	4.44	43	5.01	45	2.16	42	2.24
15	E51	4.43	58	3.35	30	3.45	16	4.31
16	C18	4.11	2	10.95	2	9.29	2	7.14
17	C65	4.05	18	7.75	3	7.58	4	5.52
18	C66	4.04	27	6.74	N/A		N/A	
19	E53	4.02	13	8.58	11	5.46	8	4.89
20	E68	3.77	48	4.57	44	2.37	47	1.45
21	E15	3.59	30	6.26	51	1.14	29	2.96
22	E3	3.46	45	4.68	33	3.08	14	4.49
23	C48	3.37	61	2.58	59	-0.73	N/A	
24	C82	3.1	33	5.79	54	0.06	40	2.37
25	C39	3.07	44	4.89	48	1.37	N/A	
26	E4	2.98	59	3.06	57	-0.3	33	2.86
27	E24	2.97	5	9.71	4	7.16	N/A	
28	E2	2.96	38	5.43	49	1.29	31	2.93
29	E95	2.79	42	5.13	27	3.86	24	3.29
30	C89	2.78	29	6.43	N/A		N/A	
31	C2	2.73	36	5.57	20	4.64	13	4.52
32	E55	2.53	66	2.01	63	-1.15	N/A	
33	C7	2.41	14	8.57	N/A		N/A	
34	E42	2.36	N/A		N/A		N/A	
35	E16	2.33	37	5.5	19	4.69	19	4.05
36	E59	2.23	26	6.78	10	5.5	35	2.65
37	E39	2.16	57	3.38	53	0.41	39	2.37
38	E67	1.85	21	7.53	21	4.43	6	5.1
39	C6	1.78	51	4.49	42	2.51	25	3.26
40	E85	1.64	22	7.31	N/A		N/A	
41	C79	1.56	28	6.62	23	4.25	N/A	
42	E20	1.49	32	6.04	17	4.82	15	4.36
43	C49	1.47	39	5.35	55	-0.16	37	2.45
44	E66	1.37	69	0.32	56	-0.18	N/A	
45	E89	1.27	40	5.34	25	4.16	N/A	

INVESTMENT POOLS $10 - $50 MILLION
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
46	E10	1.17%	63	2.23 %	64	-1.31%	41	2.36 %
47	E26	0.73	35	5.67	52	0.47	44	2.07
48	C71	0.67	65	2.18	39	2.62	N/A	
49	E17	0.59	25	6.99	28	3.74	5	5.24
50	C94	0.56	24	7.03	7	6.46	N/A	
51	C93	0.48	N/A		N/A		N/A	
52	C19	0.37	52	4.34	35	2.92	34	2.83
53	LEH-KUHN	0.33	9	9.07	6	6.57	N/A	
54	E6	0.31	60	2.86	46	2.15	18	4.17
55	C58	0.13	64	2.21	60	-0.9	38	2.44
56	C16	0.12	47	4.62	34	2.97	N/A	
57	C4	0.11	10	9.04	22	4.3	N/A	
58	C84	0.1	49	4.54	41	2.52	12	4.69
59	SP-IND	-0.1	55	3.67	47	1.82	27	3.22
60	SP500	-0.16	50	4.51	43	2.38	23	3.31
61	C32	-0.22	20	7.65	24	4.25	9	4.88
62	C47	-0.7	34	5.68	15	4.94	11	4.79
63	E71	-0.8	41	5.27	37	2.8	28	3.08
64	E37	-0.93	31	6.08	14	5	N/A	
65	SALOMON	-0.97	19	7.72	9	5.78	N/A	
66	E52	-1.47	56	3.59	31	3.39	32	2.88
67	E47	-1.7	67	1.97	58	-0.3	N/A	
68	C3	-1.79	46	4.62	32	3.37	17	4.27
69	C21	-2.95	68	1.52	61	-0.94	46	1.77
70	D-JONES	-5.81	62	2.23	36	2.82	26	3.24
71	E78	-6.75	17	7.91	18	4.82	10	4.81
TOTAL POOLS (AVERAGE RETURN)								
66		2.73%	64	2.99%	59	3.15%	44	3.70%

INVESTMENT POOLS UNDER $10 MILLION
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
1	C10	14.22 %	44	4.2 %	N/A	%	N/A	%
2	C44	13.76	2	10.26	1	10.14	19	3.05
3	C70	10.99	3	10.11	9	5.88	N/A	
4	C85	9.74	1	11.7	12	5.63	N/A	
5	E62	6.88	8	8.31	21	4.51	N/A	
6	C92	6.52	13	7.78	29	3.67	N/A	
7	C13	6.26	20	7.29	4	7.43	N/A	
8	C5	6.18	28	6.27	19	4.66	2	5.54
9	C86	5.47	7	9	5	7.28	N/A	
10	E82	4.39	11	7.89	23	4.2	N/A	
11	C26	4.19	24	6.76	25	4.19	6	4.5
12	F64	3.74	36	4.81	49	0.1	N/A	
13	F83	3.73	22	6.95	42	1.69	N/A	
14	C24	3.49	4	9.93	3	8.98	N/A	
15	C14	3.39	21	7.07	27	4.13	8	4.12
16	C91	3.37	56	1.49	32	3.12	N/A	
17	C51	3.24	32	5.73	28	3.68	N/A	
18	C88	3.15	35	4.87	26	4.17	N/A	
19	C69	3.12	15	7.59	6	7.1	N/A	
20	C52	2.9	25	6.57	18	4.71	7	4.14
21	C81	2.88	29	6.07	52	-0.15	10	3.96
22	C11	2.82	39	4.58	38	2.23	12	3.86
23	C64	2.34	16	7.57	15	5.34	3	5.29
24	C59	1.94	42	4.27	13	5.54	N/A	
25	C75	1.82	19	7.38	40	1.86	17	3.22
26	C67	1.72	12	7.83	31	3.31	N/A	
27	E91	1.7	43	4.21	44	1.37	N/A	
28	F58	1.47	18	7.49	22	4.45	N/A	
29	C50	1.36	46	3.83	33	3.1	N/A	
30	C62	1.3	10	8.09	16	5.13	N/A	
31	E76	1.22	51	3.07	37	2.32	N/A	
32	E22	1.02	5	9.17	10	5.87	4	5.24
33	C78	0.91	52	2.79	51	-0.11	21	2.51
34	C23	0.89	31	5.77	30	3.65	9	4.04
35	E7	0.86	57	1.42	53	-0.21	N/A	
36	C30	0.76	23	6.87	14	5.37	13	3.68
37	C22	0.69	17	7.54	24	4.2	5	5.06
38	C80	0.41	49	3.61	35	2.42	22	1.73
39	E77	0.35	33	5.55	39	2.22	N/A	
40	LEH-KUHN	0.33	6	9.07	8	6.57	N/A	
41	E84	0.28	26	6.47	45	1.3	N/A	
42	C36	0.17	47	3.67	N/A		N/A	
43	E13	0.1	34	5.27	20	4.66	N/A	
44	C68	-0.04	59	-1.66	N/A		N/A	
45	SP-IND	-0.1	48	3.67	41	1.82	18	3.22

INVESTMENT POOLS UNDER $10 MILLION
AVERAGE ANNUAL TOTAL RETURN PERFORMANCE
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	1 YEAR RETURN	#	3 YEAR RETURN	#	5 YEAR RETURN	#	10 YEAR RETURN
46	SP500	-0.16%	40	4.51 %	36	2.38 %	14	3.31 %
47	C37	-0.54	37	4.71	N/A		N/A	
48	C73	-0.75	N/A		N/A		N/A	
49	SALOMON	-0.97	14	7.72	11	5.78	N/A	
50	E23	-1.27	38	4.69	50	-0.06	N/A	
51	E48	-1.54	54	1.84	54	-1.06	N/A	
52	F81	-1.6	41	4.39	47	0.26	N/A	
53	E92	-1.63	9	8.31	7	6.94	N/A	
54	C20	-1.68	58	-0.6	46	0.39	20	2.72
55	E74	-1.72	45	3.84	N/A		N/A	
56	C31	-2.04	N/A		N/A		N/A	
57	E65	-2.04	30	5.89	17	5.13	11	3.94
58	C8	-2.26	50	3.35	43	1.6	N/A	
59	E79	-2.68	60	-2.37	55	-1.23	N/A	
60	E94	-2.82	N/A		N/A		N/A	
61	E12	-4.55	N/A		N/A		N/A	
62	E44	-4.78	55	1.49	48	0.25	15	3.24
63	D-JONES	-5.81	53	2.23	34	2.62	16	3.24
64	C40	-7.04	27	6.31	2	9.87	1	6.24
TOTAL POOL (AVERAGE RETURN)								
59		1.81%	55	5.59%	50	3.62%	19	4.00%

ALL INVESTMENT POOLS
RANKING BY EFFICIENCY AND BETA
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	5 YEAR EFFICIENCY	#	10 YEAR EFFICIENCY	#	5 YEAR BETA	#	10 YEAR BETA
1	C35	0.65	N/A		151	0.26	N/A	
2	C44	0.38	28	-0.12	87	0.7	54	0.72
3	E31	0.29	N/A		31	0.89	N/A	
4	C40	0.27	5	0.03	29	0.9	61	0.7
5	C24	0.27	N/A		84	0.7	N/A	
6	E75	0.25	4	0.04	1	1.66	1	1.1
7	C18	0.25	2	0.09	74	0.74	30	0.8
8	E61	0.19	8	-0.01	93	0.68	68	0.67
9	C72	0.1	3	0.05	81	0.72	90	0.52
10	C65	0.09	12	-0.05	101	0.65	71	0.67
11	C13	0.08	N/A		122	0.58	N/A	
12	C27	0.06	7	0.01	11	1.08	88	0.54
13	C86	0.05	N/A		145	0.38	N/A	
14	E24	0.05	N/A		45	0.86	N/A	
15	C41	0.05	9	-0.01	8	1.09	64	0.69
16	E92	0.03	N/A		52	0.81	N/A	
17	C77	0.01	6	0.02	14	1.02	8	0.97
18	C69	0.01	N/A		152	0.26	N/A	
19	C12	0	10	-0.04	2	1.6	52	0.72
20	LEE-KUPN	-0.02	N/A		85	0.7	N/A	
21	C85	-0.04	N/A		5	1.2	N/A	
22	C38	-0.09	1	0.1	131	0.53	94	0.48
23	C94	-0.09	N/A		150	0.28	N/A	
24	C55	-0.09	N/A		104	0.64	N/A	
25	C30	-0.11	72	-0.22	16	1	91	0.52
26	E53	-0.11	22	-0.09	26	0.94	47	0.74
27	SALOMON	-0.11	N/A		102	0.65	N/A	
28	E65	-0.11	50	-0.17	10	1.08	66	0.69
29	E22	-0.11	13	-0.06	106	0.64	53	0.72
30	C60	-0.14	26	-0.11	121	0.59	70	0.67
31	E32	-0.15	41	-0.16	47	0.84	59	0.7
32	E78	-0.15	17	-0.08	76	0.73	43	0.75
33	C4	-0.16	N/A		7	1.13	N/A	
34	E49	-0.16	54	-0.18	3	1.44	14	0.9
35	C47	-0.16	20	-0.08	24	0.95	31	0.8
36	E41	-0.17	34	-0.14	86	0.7	27	0.81
37	C70	-0.18	N/A		146	0.38	N/A	
38	E38	-0.19	31	-0.13	32	0.88	73	0.66
39	C64	-0.19	16	-0.07	92	0.69	67	0.68
40	E67	-0.19	19	-0.08	21	0.96	60	0.7
41	C91	-0.2	N/A		23	0.95	N/A	
42	E20	-0.21	24	-0.1	49	0.83	20	0.86
43	E59	-0.22	78	-0.23	116	0.59	41	0.76
44	C63	-0.22	14	-0.07	27	0.92	2	1.04
45	C25	-0.23	56	-0.18	69	0.76	92	0.49

ALL INVESTMENT POOLS
RANKING BY EFFICIENTY AND BETA
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	5 YEAR EFFICIENCY	#	10 YEAR EFFICIENCY	#	5 YEAR BETA	#	10 YEAR BETA
46	C62	-0.23	N/A		118	0.59	N/A	
47	E72	-0.23	48	-0.17	46	0.85	48	0.73
48	C2	-0.24	47	-0.17	56	0.8	93	0.48
49	C56	-0.26	15	-0.07	83	0.71	24	0.83
50	C15	-0.27	62	-0.2	30	0.89	39	0.77
51	C52	-0.27	65	-0.21	78	0.73	62	0.6
52	C26	-0.28	36	-0.14	53	0.81	69	0.67
53	E40	-0.28	83	-0.25	36	0.88	33	0.79
54	F8	-0.29	53	-0.18	66	0.77	40	0.76
55	E57	-0.29	N/A		40	0.87	N/A	
56	F13	-0.29	N/A		99	0.66	N/A	
57	E17	-0.29	18	-0.08	35	0.88	76	0.65
58	C54	-0.3	N/A		140	0.44	N/A	
59	C59	-0.3	N/A		147	0.37	N/A	
60	C22	-0.3	25	-0.1	123	0.58	79	0.62
61	E58	-0.3	N/A		95	0.68	N/A	
62	C75	-0.3	40	-0.15	4	1.23	17	0.87
63	C14	-0.3	42	-0.16	72	0.75	58	0.71
64	E54	-0.3	58	-0.19	15	1	16	0.87
65	F37	-0.31	N/A		132	0.52	N/A	
66	C88	-0.32	N/A		96	0.68	N/A	
67	C32	-0.32	35	-0.14	105	0.64	85	0.56
68	C67	-0.32	N/A		50	0.82	N/A	
69	C31	-0.32	29	-0.12	61	0.78	46	0.74
70	E5	-0.34	23	-0.09	6	1.18	6	0.98
71	D-JONES	-0.34	51	-0.17	37	0.88	21	0.84
72	E29	-0.35	88	-0.31	57	0.8	15	0.89
73	C79	-0.35	N/A		108	0.63	N/A	
74	E89	-0.36	N/A		89	0.69	N/A	
75	E19	-0.36	61	-0.2	64	0.78	25	0.82
76	C3	-0.36	49	-0.17	48	0.83	75	0.65
77	E52	-0.37	73	-0.22	68	0.76	37	0.77
78	F95	-0.37	59	-0.19	82	0.72	26	0.82
79	C16	-0.38	N/A		34	0.88	N/A	
80	SP500	-0.38	30	-0.13	17	1	4	1
81	E71	-0.39	68	-0.21	44	0.86	35	0.77
82	F16	-0.41	39	-0.15	136	0.47	49	0.73
83	C8	-0.41	N/A		12	1.04	N/A	
84	E64	-0.41	N/A		13	1.02	N/A	
85	F73	-0.42	67	-0.21	90	0.69	63	0.69
86	E11	-0.42	21	-0.09	28	0.91	11	0.93
87	C23	-0.43	82	-0.24	98	0.67	64	0.57
88	E62	-0.44	N/A		149	0.28	N/A	
89	C51	-0.44	N/A		100	0.66	N/A	
90	C9	-0.45	66	-0.21	103	0.65	80	0.62
91	C92	-0.46	N/A		128	0.55	N/A	
92	SP-IND	-0.46	32	-0.13	22	0.96	5	1
93	E6	-0.46	43	-0.16	33	0.88	65	0.69
94	E82	-0.47	N/A		142	0.42	N/A	
95	C19	-0.48	87	-0.31	68	0.7	81	0.61

ALL INVESTMENT POOLS
RANKING BY EFFICIENCY AND BETA
FOR THE PERIOD ENDING JUNE 30, 1978

#	CODE NAME	5 YEAR EFFICIENCY	#	10 YEAR EFFICIENCY	#	5 YEAR BETA	#	10 YEAR BETA
96	C84	-0.49	11	-0.04	71	0.75	3	1.04
97	C81	-0.5	27	-0.12	9	1.06	97	0.02
98	E26	-0.5	69	-0.22	18	1	9	0.94
99	F68	-0.51	81	-0.24	75	0.73	7	0.96
100	E3	-0.52	37	-0.15	109	0.62	74	0.66
101	C80	-0.52	96	-0.36	67	0.77	62	0.7
102	F2	-0.53	76	-0.22	42	0.87	38	0.77
103	C82	-0.53	60	-0.19	19	1	12	0.93
104	E44	-0.55	38	-0.15	20	0.97	13	0.92
105	E1	-0.55	85	-0.25	51	0.82	28	0.81
106	E91	-0.55	N/A		43	0.86	N/A	
107	C50	-0.56	N/A		107	0.63	N/A	
108	C11	-0.56	45	-0.16	79	0.73	44	0.75
109	C29	-0.56	77	-0.3	119	0.59	50	0.73
110	C71	-0.58	N/A		112	0.61	N/A	
111	E51	-0.59	33	-0.14	137	0.47	51	0.73
112	E90	-0.59	N/A		115	0.59	N/A	
113	E27	-0.59	46	-0.16	39	0.87	29	0.81
114	C39	-0.6	N/A		60	0.78	N/A	
115	F84	-0.6	N/A		94	0.68	N/A	
116	E28	-0.61	94	-0.35	130	0.53	86	0.56
117	C6	-0.62	92	-0.34	113	0.61	89	0.53
118	E77	-0.64	N/A		127	0.55	N/A	
119	E83	-0.64	N/A		134	0.49	N/A	
120	F46	-0.65	N/A		58	0.8	N/A	
121	F15	-0.65	74	-0.22	143	0.41	57	0.71
122	F21	-0.66	57	-0.18	114	0.61	56	0.71
123	C48	-0.67	N/A		25	0.94	N/A	
124	C17	-0.67	90	-0.33	125	0.57	77	0.65
125	E81	-0.68	N/A		59	0.79	N/A	
126	E18	-0.69	63	-0.2	63	0.78	23	0.83
127	C42	-0.72	80	-0.24	70	0.76	32	0.8
128	E33	-0.73	N/A		126	0.56	N/A	
129	E4	-0.74	79	-0.23	54	0.81	45	0.75
130	E36	-0.74	64	-0.21	148	0.34	34	0.78
131	E30	-0.76	44	-0.16	117	0.59	18	0.87
132	F23	-0.78	N/A		91	0.69	N/A	
133	E34	-0.79	91	-0.34	111	0.62	83	0.57
134	E10	-0.78	71	-0.22	38	0.88	19	0.87
135	F55	-0.78	N/A		41	0.87	N/A	
136	C5	-0.79	52	-0.18	153	0.24	96	0.3
137	E39	-0.81	93	-0.35	97	0.67	78	0.63
138	E63	-0.82	55	-0.18	77	0.73	55	0.71
139	E56	-0.82	N/A		110	0.62	N/A	
140	C49	-0.84	86	-0.3	124	0.58	72	0.66

ALL INVESTMENT POOLS
RANKING BY EFFICIENCY AND BETA
FOR PERIOD ENDING JUNE 30, 1978

#	CODE NAME	5 YEAR EFFICIENCY	#	10 YEAR EFFICIENCY	#	5 YEAR BETA	#	10 YEAR BETA
141	F76	-0.84	N/A		133	0.5	N/A	
142	C34	-0.84	N/A		129	0.53	N/A	
143	C21	-0.85	89	-0.32	55	0.8	42	0.[illegible]
144	E7	-0.86	N/A		80	0.72	N/A	
145	C58	-0.86	84	-0.25	62	0.76	36	0.77
146	E48	-0.95	N/A		73	0.74	N/A	
147	E50	-1.02	70	-0.22	138	0.46	22	0.84
148	E70	-1.05	75	-0.22	65	0.78	10	0.93
149	E47	-1.1	N/A		120	0.59	N/A	
150	C20	-1.15	95	-0.36	141	0.42	87	0.55
151	F66	-1.18	N/A		135	0.49	N/A	
152	C78	-1.2	97	-0.46	139	0.44	95	0.41
153	E79	-1.53	N/A		144	0.39	N/A	
TOTAL POOLS (AVERAGE FIGURES)								
148		-4.0	94	-0.17	148	0.74	94	0.73

EXHIBIT IV

INSTITUTIONS WHICH APPLY TOTAL RETURN FOR BUDGETING PURPOSES

Institution	1977-78 Spending Rate Formula	Spending Rate Formula Change From Prior Years
The Academy of the New Church	4½% increase in income over the previous year	No change
Amherst College	Based on 20-quarter average	N/A
Berea College	4.6% of a 3-year moving average 1 year back	No change
Boston University	5% based on a 5-year moving average	No change
Bowdoin College	5% of a 5-year moving average of the market value	6% for 76-77 only
Brown University	4½-5½% of average market value for preceding calendar year	Change from best-fit projection of prior 10 years.
Bryn Mawr College	All income earned on bonds and mortgage. Also an amount equivalent to 5% of the average market value of common stock over the last 5 years.	No change
California Institute of Technology	5% of market value of the pooled endowment portfolio averaged over a prior three-year period.	No change
Carleton College	5.5% of the 5-year average market value of endowment assets computed quarterly set back 1 year.	75-76 rate of 5% was applied only to managed funds, using 3 years' value. Actual income of non-managed funds was added to the 5%.
Carnegie-Mellon University	N/A	N/A
Carroll College	6% of the average market values of the previous 3 years after adjusting the lst 2 years for subsequent principal additions or withdrawals (other than TRC withdrawals).	N/A
Clark University	5% of a 20-quarter moving aferage	3 year to 5 year base
College of Wooster	6% of 12-quarter average marker value of total return portfolios	Change 5.6% to 6.0% in 1977

Columbia University	N/A	N/A
Cooper Union	Assumption of a longer term combined total return of 9% and use of 4% for operations.	No change
Cornell College	5.5% of 6/30 market value	From 5% to 5.5%
Cornell University	Spending rate is defined as ¢ per unit declared at beginning of year by Trustees.	¢ per unit has been decreased each year for past 3 years. 11.5% for 1978 vs. 24.5¢ is 1976.
Dartmouth College	4.9% of a 3-yr. quarterly average of market value and net additions, set back one year. 4.9% raised to 5% for 1978-79.	Spend a specific amount increased by Trustee vote over prior year
Doane College	5% of the average market value on June 30 of the last 3 years with a minimum guarantee	No change
Franklin and Marshall College	N/A	N/A
Johns Hopkins University	We believe it is necessary to budget an absolute amount that is not likely to be reduced in future years.	N/A
Kenyon College	5% of market value calculated at beginning of fiscal year	N/A
Marquette University	We withdraw an amount equal to 5% of a 3-year moving average of the total market value at June 30 for the latest 3 fiscal yrs. plus current year additions on a time weighted basis.	N/A
Occidental College	5%	No change
Ohio Wesleyan University	N/A	No change
Otterbein College	5% of previous 3-yr. moving average of values at Dec. 31st.	No change
Reed College	Use a 12-quarter moving unit to derive average, then use 5% as income factor.	No change
Rensselaer Polytechnic Institute	5% return of the average of the 12 preceding quarters' market value	No change

Rhode Island School of Design	5% of moving 5-year market value	No change
Smith College	5% of the average market value of the 12 quarters preceding the start of the fiscal year	No change
Spelman College	5% of the average value of the endowment over 12 quarters, but with a minimum contribution	No change
Stanford University	25% of 4.75% times market value plus 75% of endowment growth rate times prior year payout	Payout was 5% of 36-month moving average
State University of New York at Binghamton	N/A	No change
Swarthmore College	5% 20-quarter average market value	No change
Syracuse University	N/A	No change
University of Chicago	5.0% of moving average market values of 6 of the last 10 years (adj. for gifts) ending 12/31 prior to the start of the fiscal year with 2 highest and the 2 lowest years excluded from the average.	Rate was 5.5% of 12 quarters ending 12/31 prior to fiscal yr. adjusted for gifts
University of Mississippi	N/A	No change
University of Rochester	5% of market value average of previous 5 years.	No change
University of Virginia	4% of 3 year average market value	No change
Vassar College	N/A	N/A
Wesleyan University	Board approves a dollor reliance figure for the support of operations and capital expenditures	Support was calculated at 5% and 2% for operating and capital expenditures respectively of a 3-yr. average
Whittier College	N/A	N/A
Williams College	Increase amount spendable by 6% over prior year	No change
Yale University	4.5% of 5-year moving average	No change

EXHIBIT V

INDEX OF INVESTMENT MANAGERS

Institution		Investment Managers
The Academy of New Church		Pitcairn, Inc. (S,B)
Agnes Scott College		Trust Co. of Georgia (S,B)
Albion College		Trust Dept. Nat'l Bank Detroit (S,B) Stein, Roe & Granham (S,B)
Alfred University		BEA Associates, Inc. (S,B) Reich & Tang, Inc. (S,B)
	*	Howe & Rusling (S,B)
Alma College		MacKay-Shields Corp. (S)
The American University	*	First Nat'l Bank of Chicago (S,B)
Amherst College	*	Massachusetts Financial Services (S,B)
Arizona State College		Internally Managed
Babson College		Babson Reports, Incorporated (S,B)
Baldwin-Wallace College		Internally Managed
Barnard College		Internally Managed
Baylor College of Medicine		Internally Managed
Berea College		Morgan Guaranty Trust (S,B) David L. Babson & Co. (S,B) Century Capital Associates (S,B)
Boston University		Internally Managed
Bowdoin College	*	Manufacturers Hanover Trust & Co. (S,B)
Brandeis University		Brundage, Story & Rose (S,B) New Court Capital Management (S,B) Julian Lerner (S,B)
Brown University		Putnam Advisory Co. Inc (S,B) Morgan Guaranty Trust C. (S,B)
Bryn Mawr College		David L. Babson (S,B)
	*	J&W Seligman (S,B)
Bucknell University	*	Internally Managed
California Institute of Technology		Endowment Management & Research (S)
	*	IDS Advisory (S,B)

*The Common Fund

Carleton College		Alliance Capital Management Minneapolis (S,B) Endowment Management & Research Boston (S,B)
	*	The St. Paul Companies, Inc. St. Paul (S,B)
Carnegie-Mellon Universtiy		Capital Guardian Trust Co. (S) Delaware Investment Advisors Inc. (S) F. Eberstadt & Co. Inc. (S) Pittsburgh National Bank (S) Mellon Bank (S,B) Fischer, Francis, Trees & Watts Inc (B)
Carroll College		M & I Marshall & Ilsey Bank (S,B)
	*	Board of Aid Trust Fund (United Presbyterian Church (S,B)
Case Western Reserve University		Central Nat'l Bank Cleveland (S,B) Cleveland Trust Co. (S,B) Nat'l City Bank of Cleveland (S,B)
Clark University		New Court Capital Management Inc. (S,B)
Coe College	*	Northern Trust Co. (S,B)
Colby College		David L. Babson, Inc. (S,B)
Colgate University		Miller Anderson and Sherrard (S)
College of Wooster		Woodbyne Corporation (S,B)
Colorado College		John W. Bristol & Co. Inc. (S,B)
Columbia University		Internally Managed
Teachers College-Columbia University		Fiduciary Trust & Company (S) T. Rowe Price Associates (S) Scudder, Stevens & Clark (B)
Cooper Union		Miller Anderson & Sherrerd (S,B) Cooke & Bieler (S,B) U. S. Trust (S,B)
Cornell College		Stein, Roe & Farham (S,B)
Cornell University		Internally Managed
Dartmouth College		State Street Research & Management (B) Delaware Investment Advisors (S) Pioneering Management Corp. (S)
	*	T. Rowe Price (S)
Denison University		Cleveland Trust Co. (S,B) Nat'l City Bank Cleveland (S,B)

*The Common Fund

Dickinson College	*	American Bank & Trust Co. (S,B)
Doane College		Hartford Nat'l Bank (S,B) Nat'l Bank of Commerce (S,B)
Drake University		Harris Trust & Savings Bank - Chicago (S,B)
Drew University		Smith Barney, Harris Upham & Co. (S,B)
	*	Lionel D. Eddie & Co. (S,B)
Eastern Michigan University		Ann Arbor Trust Co.
Franklin and Marshall College		Internally Managed
Georgetown University		Chase Investors Managers (S,B)
Goerge Washington University		David L. Babson & Co. Inc (S,B)
Hampton Institute	*	Smith Barney Harris Upham & Co., Inc. (S,B)
Harvard University		Internally Managed Brown Brothers Harriman (B)
	*	Scudder Stevens & Clark (B)
		Fiduciary Trust Co. (S) F. Eberstadt Corp. (S) MacKay-Shields Financial Corp. (s)
Hendrix College	*	Scudder Stevens & Clars (S,B)
Hobart and William Smith Colleges		Security Trust Co. (S,B)
Hope College		ISI - San Francisco, California (S,B)
Indiana University		Indiana National Bank (S,B)
	*	American Fletcher Nat'l Bank (S,B)
		Merchants National Bank (S,B)
Johns Hopkins University	*	Miller, Anderson & Sherrerd (S) Weiss Peck & Greer (S)
Kenyon College		Woodbyne Corp. (S,B)
Lafayette College		Schroeder, Naess & Thomas (S,B) Thorndike, Doran, Paine & Lewis (S,B)
Lehigh University		Internally Managed
Macalester University		Chemical Bank of New York (S,B) Northwestern Nat's Bank Minneapolis (S,B) First Trust Co. St. Paul (S,B)
Marquette University		Heritage Investment Advisors Inc. (S,B) M & I Marshall & Ilsley Bank (S,B)

*The Common Fund

Massachusetts Institute of Technology	*	Thorndike, Doran, Paine & Lewis Inc. (S,B)
Medical College of Pennsylvania		Cooke & Bieler (S,B)
Mercer University	*	Internally Managed
Michigan State University	*	Scudders, Stevens & Clark (S,B) Detroit Bank & Trust Co. (S,B)
Middlebury College	*	Beck, Mack & Oliver (S,B) David L. Babson and Co., Inc. (S) Stralem & Co., Inc. (S)
Monmouth College		Central Jersey Bank & Trust (B) Citibank (S,B)
Mt. Holyoke College		Scudder, Stevens & Clark (S,B)
Muhlenberg College		Internally Managed
Northwestern University		Internally Managed
Oakland University		Ann Arbour Trust Co. (S,B)
Oberlin College	 *	Capital Guardian Trust Co. (S) Wertheim Asset Management Services (S,B) First Nat'l Bank of Atlanta (S,B) Nat'l City Bank Cleveland (S,B)
Occidental College	*	Scudder, Stevens & Clark (S,B)
Ohio State University		Neuberger Corp. Mutual Fund (S) City Nat'l Bank Index Fund (S) Chicago Corp. (S)
Ohio Wesleyan University		Morgan Guaranty Trust (S,B)
Oregon State Board of Higher Education		George D. Bjurman & Associates (S,B) Kennedy Associates (S,B)
Oregon State University Foundation		Bank of California (S,B)
Otterbein College	*	Ohio National Bank (S,B)
Pennsylvania State University		Mellon Bank (S,B)
Philadelphia College of Textiles and Science		Girard Bank (S,B) Philadelphia Nat'l Bank (S,B)
Princeton University	 *	John Bristol & Co. (S,B) Vilas-Fisher Associates LTD (S,B) Capital Guardian Trust Co. (S,B) Scudder, Stevens & Clark (S,B)
Reed College		Internally Managed

*The Common Fund

Rensselaer Polytechnic Institute	*	Miller Anderson Sherrerd (S,B) U. S. Trust Co. (B) Brundage Story & Rose (S,B)
Rhode Island School of Design		Endowment Management & Research Inc. (S,B) Essex Investment Management Co. (S,B) Beck, Mack & Oliver (S,B)
Rice University		N/A
Rochester Institute of Technology		Lincoln First Bank of Rochester (S,B)
Rutgers, The State University		Chemical Bank of New York (S,B)
St. Norbert College	*	(Externally managed endowment held under Trust Agreements)
Simmons College		Phoenix Investment Counsel of Boston (S,B)
Smith College	*	Morgan Guaranty Trust Co. New York (S) Capital Guardian Trust CO. (S) Beck, Mack & Oliver (S)
Spelman College		Centennial Capital Corp. New York (S,B) Weiss, Peck & Greer New York (S,B)
Stanford University	*	Capital Guardian Trust Co. (S,B)
State University of New York at Binghamton		Internally Managed
State University of New York at Buffalo		Manufacturers & Traders Trust Co. (S,B) Marine Midland Bank (S)
Swarthmore College	*	John W. Bristol & Co. (S,B)
Sweet Briar College	*	Capitoline Investment Services (S,B)
Syracuse University		Internally Managed
Trinity College	*	*Hartford Nat'l Bank & Trust Co. (S,B)
Tufts University		Endowment Management & Research (S,B)
University of Akron		First Nat'l Bank of Akron (S,B) Akron Nat'l Bank (S,B)
University of Alabama		Internally Managed
University of Arizona		Internally Managed
University of Arkansas	*	*Internally Managed
University of California	*	*Internally Managed
University of Chicago		Internally Managed

*The Common Fund

University of Connecticut		Internally Managed
University of Dayton		Boston Co. Financial Strategies, Inc.(S,B)
University of Delaware		Internally Managed Wilmington Trust Co. (S,B) Delaware Trust Co. (S.B) Bank of Delaware (S)
University of Evansville	*	Internally Managed
University of Illinois		First Nat'l Bank of Chicago Trust Dept (S,B)
University of Maine		Putnam Capital Services Inc. (S,B)
University of Maryland		Thorndike, Doran, Paine & Lewis Inc. (S,B)
University of Miami		Citizens & Southern Investment Counseling Inc. (S,B) Southeast First Nat'l Bank of Miami (S,B)
University of Michigan	*	Nat'l Bank of Detroit (S,B)
University of Minnesota		First Trust Co. of St. Paul (S,B) Investment Advisors Inc. (S) Northwestern Nat'l Bank of Minneapolis (S,B) T. Rowe Price Associates (S) Thorndike, Doran, Paine & Lewis Inc. (S,B) Alliance Capital Management Corp. (S)
University of Mississippi	*	Nicholas B. Kronwall Tucson Arizona (S)
University of Missouri		The Boatmen's Nat'l Bank of St. Louis (S,B)
University of Nebraska		Omaha Nat'l Bank (S,B)
University of Nevada System		First Nat'l Bank of Nevada (S,B) Valley Bank of Nevada (S,B)
University of Notre Dame		Massachusetts Financial Services (B) Brundage, Story & Rose (S) Stein, Roe & Farnham (S) Capital Guardian Trust Co. (S)
University of Oregon Development Fund		Henderson-Boston Co. San Francisco (S,B)
University of Pennsylvania		Internally Managed
University of Pittsburgh	*	Mellon Bank (S,B) Pittsburgh Nat'l Bank (S,B)
University of Puget Sound		Pringle, Flinn, Elvins & Donahoe (S,B)

*The Common Fund

University of Richmond	*	Alliance Capital Management (B) Wheat Advisory Services (Stocks & Options)
University of Rochester		Internally Managed
University of Santa Clara		McCullough & Andrews Inc. (S,B)
University of Tennessee		Lionel D. Edie Co. (S)
University of Vermont		Brundage, Story & Rose (S,B)
University of Virginia		T. Rowe Price Associates (S)
	*	Brundage, Story & Rose (S)
		John W. Briston (S)
		William A. Hobbs (S,B)
		American Nat'l Bank Chattanooga (S,B)
University of Wisconsin		Heritage Investment Advisors Inc. Milwaukee (S,B)
Vassar College		J. W. Seligman & Co. (S,B)
Virginia Military Institute		First&Merchants Nat'l Bank Richmond, VA(S,B)
		Capitoline Investment Services Richmond,VA (S,B)
Wake Forest University		Montag & Caldwell (S,B)
		T. Rowe Price & Associates (S,B)
		Templeton, Dobbrow & Vance (S,B)
		First Union Nat'l Bank (S,B)
		Sterling Management Inc. (S,B)
Washburn College		Trust Dept. Hartford Nat'l Bank & Trust (S,B)
Washington State University		Smith Barney. Harris Upham & Co. (S,B)
Washington University		St. Louis Union Trust Co (S,B)
		Mercantile Trust Co. (S,B)
		Boatmen's Nat'l Bank (S,B)
		Scudder, Stevens & Clark (B)
		Thorndike, Doran, Paine & Lewis, Inc. (S)
Wayne State University	*	Internally Managed
		Detroit Bank & Trust (S,B)
Wellesley College		Internally Managed
Wesleyan University		Brokaw Capital Management (S)
	*	Brundage, Story & Rose (S)
		Drexel Burnham Lambert (S)
		Scudder, Stevens & Clark (B)

*The Common Fund

Wheaton College	New England Merchants (S,B)
Whitman College	Internally Managed
Whittier College	Hillside Associates, Inc. (S,B) The Boston Co. (S,B)
Willamette University	Dodge & Cox (B) James Miller (B) U. S. Nat'l Bank Oregon (B)
Williams College	Miller Anderson & Sherrerd (S,B) Scudder, Stevens & Clark (S,B)
Yale University	Endowment Managemetn & Research (S,B) Miller Anderson & Sherrerd (S) T. Rowe Price (S) Fischer, Francis, Trees & Watts (B)

*The Common Fund

EXHIBIT VI

INDEX OF ENDOWMENT CUSTODIANS

Institution	Custodian
The Academy of the New Church	Industrial Valley Bank
Agnes Scott College	Trust Company of Georgia
Albion College	Trust Dept., National Bank of Detroit
Alfred University	Chemical Bank of New York
Alma College	Paine Webber Jackson & Curtis, Inc.
American University	First National Bank of Chicago
Amherst College	United States Trust Company
Arizona State College	Northern Trust Company of Arizona
Babson College	Brown Brothers Harriman & Company
Baldwin-Wallace College	Cleveland Trust Company
Barnard College	United States Trust Company, New York
Baylor College of Medicine	Bank of the Southwest Baptist Foundation of Texas
Berea College	Morgan Guaranty First Kentucky Trust
Boston University	Boston Safe Deposit & Trust Company
Bowdoin College	State Street Bank & Trust Company
Brandeis University	First National Bank of Boston
Brown University	Morgan Guaranty Trust
Bryn Mawr College	J. & W. Seligman
Bucknell University	Morgan Guaranty Trust
California Institute of Technology	Security Pacific National Bank
Carleton College	Northwestern National Bank of Minneapolis New England Merchants Bank, Boston
Carnegie-Mellon University	Mellon Bank
Carroll College	M & I Bank

Case Western Reserve University	Central National Bank Cleveland Trust Company National City Bank
Clark University	Guaranty Bank & Trust
Coe College	Northern Trust Company
Colby College	Depositors Trust Company Bankers Trust Company
Colgate University	Chemical Bank
College of Wooster	First Trust Company of Ohio
Colorado College	First National Bank of Colorado Springs
Columbia University	Manufacturers Hanover Bank
Teachers College, Columbia University	Morgan Guaranty Trust Company
Cooper Union	United States Trust
Cornell University	Morgan Guaranty Trust Company
Dartmouth College	Chase Manhattan Bank
Denison University	Cleveland Trust Company National City Bank
Dickinson College	American Bank & Trust Company
Doane College	Hartford National Bank National Bank of Commerce
Drake University	Harris Trust & Savings Bank
Drew University	Bankers Trust Company
Eastern Michigan University	Ann Arbor Trust Company
Franklin and Marshall College	National Central Bank
Georgetown University	Chase Manhattan Bank
George Washington University	Internal
Hampton Institute	United States Trust Company
Harvard University	State Street Bank & Trust Company

Hendrix College	Commercial National Bank
Hobart and William Smith Colleges	Security Trust Company
Hope College	Ole Kent Bank & Trust
Indiana University	Indiana National Bank American Fletcher National Bank Merchants National Bank
Johns Hopkins University	Fiduciary Trust Company of New York
Kenyon College	Cleveland Trust Company
Lafayette College	Eastern National Bank & Trust Company
Lehigh Univeristy	Morgan Guaranty Trust Company
Macalester College	Chemical Bank of New York Northwestern National Bank of Minneapolis First Trust Company of St. Paul
Marquette University	Marshall & Ilsley Bank
Massachusetts Institute of Technology	First National Bank of Boston
Medical College of Pennsylvania	Philadelphia National Bank
Mercer University	Internal
Michigan State University	Detroit Bank & Trust Company
Middlebury College	Chase Manhattan Bank of New York
Monmouth College	Central Jersey Bank & Trust Citibank
Mount Holyoke College	New England Merchants National Bank
Muhlenberg College	Janney Montgomery Scott
Northwestern University	State Bank, Evanston Money Market, Savings, Cash
Oakland University	Ann Arbor Trust Company
Oberlin College	National City Bank (Cleveland)
Occidental College	Security Pacific National Bank

Ohio State University	City National Bank, Columbus Ohio National Bank, Columbus Neuberger Corporation, New York City
Ohio Wesleyan University	Morgan Guaranty Trust Company
Oregon State Board of Higher Education	First National Bank of Oregon
Oregon State University Foundation	Bank of California
Otterbein College	Ohio National Bank Huntington National Bank
Pennsylvania State University	Mellon Bank
Philadelphia College of Textiles and Science	Philadelphia National Bank Girard Bank
Princeton University	United States Trust Company of New York
Reed College	First National Bank of Oregon
Rensselaer Polytechnic Institute	National Commercial Bank Harris Bank Bankers Trust
Rhode Island School of Design	Rhode Island Hospital Trust National Bank
Rice University	Internal
Rochester Institute of Technology	Lincoln First Bank Central Trust Company Marine Midland Trust Company Security Trust Company
Rutgers, the State University	Chemical Bank of New York
St. Norbert College	Citizens Bank of Sheboygan Harris Trust & Savings Bank, Chicago
Simmons College	New England Merchants Trust Company
Smith College	Morgan Guaranty Trust Company
Spelman College	Chase Manhattan Bank
Stanford University	Wells Fargo Bank
State University of New York at Binghamton	First City National Bank
State University of New York at at Buffalo	Manufacturers & Traders Trust Company Marine Midland Bank

Swarthmore College	Girard Bank
Sweet Briar College	United Virginia Bank First National Bank of Virginia
Syracuse University	First Trust & Deposit Company
Trinity College	Hartford National Bank & Trust Company
Tufts University	First National Bank of Boston
University of Akron	First National Bank Akron National Bank
University of Alabama	Internal
University of Arizona	Internal
University of Arkansas	Internal
University of California	Bank of California
University of Chicago	Morgan Guaranty
University of Dayton	Boston Safe Deposit & Trust Company
University of Delaware	Wilmington Trust Company Delaware Trust Company Bank of Delaware
University of Evansville	Internal
University of Illinois	First National Bank of Chicago
University of Maine	Merrill Trust Company Merchants National Bank State of Maine
University of Maryland	Union Trust Company of Maryland Treasurer of State
University of Miami	Security Trust Company, Miami Guaranty Trust Company, New York Southeast First National Bank, Miami Florida National Bank of Miami
University of Michigan	National Bank of Detroit Detroit Bank & Trust Company
University of Minnesota	First National Bank of Minneapolis North West National Bank of Minneapolis

University of Mississippi	Deposit Guaranty National Bank, Jackson
University of Missouri	The Boatman's National Bank of St. Louis
University of Nebraska	Omaha National Bank
University of Nevada	First National Bank Valley Bank
University of Notre Dame	Chase Manhattan American Bank, South Bend First Bank, South Bend
University of Oregon Development Fund	United States National Bank of Oregon
University of Pennsylvania	Fidelity Bank
University of Pittsburgh	Mellon Bank Pittsburgh National Bank
University of Puget Sound	Puget Sound National Bank
University of Richmond	Central National Bank
University of Rochester	Lincoln First Bank of Rochester Security New York State Corporation Central Trust Company
University of Santa Clara	Barclays Bank of California Pacific Property Management The Gilley Company
University of Tennessee	United American Bank, Knoxville
University of Vermont	First National Bank of Boston
University of Virginia	Fiduciary Trust Company of New York United Virginia Bank American National Bank
University of Wisconsin	Morgan Guaranty Trust, New York
Vassar College	J. & W. Seligman & Company
Virginia Military Institute	First & Merchants National Bank Capitoline Investment Services
Wake Forest University	Wachovia Bank & Trust Company First Union National Bank
Washburn College	Hartford National Bank & Trust Company

Washington State University	Smith Barney Harris Upham & Company
Washington University	St. Louis Union Trust Company Mercantile Trust Company Boatman's National Bank First National Bank DTC
Wayne State University	Detroit Bank & Trust Manufacturers National Bank
Wellesley College	State Street Bank & Trust
Wesleyan University	U. S. Trust Company
Wheaton College	New England Merchants National Bank
Whitman College	Internal
Whittier College	Bank of America
Willamette University	United States National Bank of Oregon
Williams College	U. S. Trust Company of New York
Yale University	Chemical Bank

APPENDIX I

EXPLANATION OF METHOD USED FOR MEASURING PERFORMANCE OF PORTFOLIO MANAGER

The choice between the geometric average return (average total return) figure and the internal rate of return figure depends on what it is one wishes to measure: the skill of the individual or committee which actually manages the investment of the endowment fund, or the success of the investment management coupled with the decision or policy that governs withdrawal of funds from the endowment (and contribution of funds to the endowment). Both figures are "correct," but the internal rate of return should not be used for judging portfolio management, nor should the goemetric average not be used for judging the overall results of portfolio management and decisions on when to add the withdraw funds.

For most endowment funds the geometric average is probably the more important figure. This is particularly true if additions of funds to an endowment and withdrawals of funds do not reflect any judgment skill, but simply follow a policy of adding funds when contributions are received and withdrawing income either when the dividends and interest are received or at predetermined dates. The reason for looking at the internal rate of return in addition to the geometric average is to determine how well the investor is timing additions and withdrawals.

College officials often object to the use of the geometric average, protesting that: "This average assumes that income is reinvested, and we don't reinvest income." It is quite true that they do not reinvest income, but if what is to be determined is the quality of investment performance being achieved by the manager of the endowment fund, then the performance record of the manager should not be penalized by unfortunate timing of withdrawals over which the manager has no control.

Adapted from Performance Measurements and Investment Objectives for Educational Endowment Funds by J. Peter Williamson (New York: The Common Fund, 1972),

APPENDIX II

PERFORMANCE OF POOLED INVESTMENT FUNDS

EXPLANATION OF COMPUTATIONS

The computations required to create the tabular and performance data used in the comparative performance of pooled investment funds are accomplished by a computer program entitled FUNDPER. The program FUNDPER draws on the basic data file compiled for each individual investment pool. Data contain the endowment pool's year-end unit value (at market) and the dollar value per unit of income received for the year. Drawing on the basic file, FUNDPER first creates a yearly chart of tabulated data as shown below; for any number of consecutive years within the limits of the basic data file it calculates various performance statistics.

Statistical Summary Sheet

INSTITUTIONAL CODE NAME - SP 500

COL 1 YEAR	COL 2 BASE	COL 3 UNIT	COL 4 APPRE	COL 5 INCOME	COL 6 YLD PCT	COL 7 GPO PCT	COL 8 TOT RET PCT
1973	100	104.26					
1974	82.49	86	-18.[illegible]	3.5	3.36	-17.51	-14.16
1975	91.3	95.19	9.19	3.71	4.31	10.69	15
1976	100.2	104.28	9.09	3.88	4.08	9.55	13.63
1977	96.37	100.48	-3.8	4.36	4.18	-3.64	0.54
1978	91.63	95.53	-4.95	4.91	4.89	-4.93	0.04
ARITH AVGS 5 YRS ENDING IN 1978					4.16	-1.17	2.99
GEOM AVGS					4.16	-1.73	2.43

APPRECIATION	8.37 PERCENT
CORRESPONDING AVG ROR	-1.28 PERCENT
APPREC WITH INC REINV	12.48 PERCENT
CORRESPONDING AVG ROR (AV T/R)	2.38 PERCENT

Exhibit A contains examples of the mathematics used by FUNDPER for that portion of the tabulated data which is computed. The balance of the tabulated data is reproduced from the basic data file.

An explanation of the columns for 1978 in the above chart is as follows:

Col. 1 Fiscal Year: July 1/June 30.

Col. 2 Base: This gives the first year the unit value is available an index of 100 and adjusts the succeeding unit values accordingly. In the above example the first year the S&P 500 unit value figures were available was the fiscal year ending 6/30/73.

Col. 3 Unit Value: Supplied by participating institution.

Col. 4 Appreciation: Appreciation is computed by subtracting the 1977 unit value from the 1978 unit value.

Col. 5 Income Per Unit: Supplied by participating institution.

Col. 6 Yield Percent: Yield percent is computed by taking the 1978 income per unit, dividing it by the 1977 unit value, and multiplying by 100.

Col. 7 Growth Percent: Growth percent is computed by taking the 1978 appreciation, dividing it by the 1977 unit value, and multiplying by 100.

Col. 8 Total Return Percent: Total return percent is computed by adding the 1978 appreciation to 1978 income, then dividing by the 1977 unit value, and multiplying by 100.

Exhibit B contains examples of the mathematics used by FUNDPER in determining arithmetic and geometric averages of yield, growth, and total return for the period specified. They are computed as follows:

1. Arithmetic Average 5 Years Ending 1978: Add either the 5 yearly yield, growth, or total return percentages and divide by 5.

2. Geometric Average 5 Years Ending 1978: Add one to each of the 5 yearly yield, growth, or total return percentages expressed as a decimal, multiply these figures, then take the fifth root of that value, subtract 1, and multiply by 100.

Exhibit C contains examples of the mathematics used by FUNDPER in making comparative performance computations. Using the five-year period 1973-1978 as an example, the four comparative performance percentages are computed as follows:

1. Total Percent Appreciation: The total percent appreciation is computed by dividing the 1978 unit value by the 1973 unit value, subtracting 1, and multiplying by 100.

2. Corresponding Annual Geometric Average Growth Rate: The corresponding annual geometric growth rate is computed by taking the fifth root of the 1978 unit value divided by the 1973 unit value, subtracting 1, and multiplying by 100.

3. Total Percent Appreciation with Income Reinvested: The total percent appreciation with income reinvested is calculated as follows:

   a. Determining the number of units that could have been purchased with income of one unit for the year 1973-1974, using the average of the 1973 and 1974 unit values as the price of a new unit.

   b. Adding the new units so purchased to the original unit held.

c. Determining the income on the new total units held for the next year 1974-1975, calculating the number of units that could have been purchased with income in that year, again using the average beginning and end of year unit values as the price of new units, and so on to the end of the five years, i.e., the end of 1978.

d. Calculating the total value of the units held as of 1978 multiplied by the 1978 unit value, and dividing this by the 1973 unit value, subtracting 1, and multiplying by 100.

4. Corresponding Annual Geometric Average Growth Rate: The corresponding annual geometric average growth rate (with income reinvested) is computed by adding 1 to the total of the units purchased during each of the five years, multiplied by the unit value at the end of 1978, divided by the 1973 unit value, taking the fifth root, subtracting 1, and multiplying by 100.

Exhibit A (APPENDIX II)

Tabulated Data Computations

Col. 4 Appreciation

1977 Unit Value - 1976 Unit Value
100.48 - 104.28 = -3.8

Col. 6 Yield Percent

(1977 Income/1976 Unit Value) X 100
(4.36/104.28) X 100 = 4.18%

Col. 7 Growth Percentage

(1977 Appreciation/1976 Unit Value) X 100
(-3.8/104.28) X 100 = -.364%

Col. 8 Total Return Percent

(1977 Appreciation + 1977 Income)/1976 Unit Value X 100
[(-3.8 + 4.36)/104.28] x 100 = .54%

Exhibit B (APPENDIX II)

Arithmetic and Geometric Averages

Arithmetic Average Total Return Percentage*

(Total Return Percentage for 1972-73 + 1973-74 + 1974-75 + 1975-76 + 1976-77)

$$\frac{.32 + (.14.16) + 15.0 + 13.63 + .54}{5}$$ = 3.06% for 5 years ending June 30, 1977

Geometric Average Total Return Percentage*

(([Total Return for (1972-73 + 1) X (1973-74 + 1) X (1974-75 + 1) X
(1975-76 + 1) X (1976-77 + 1)] ↑ (1/5)> - 1) X 100

(([(.0032 + 1) X (-.1416 + 1) X (.15 + 1) X (.1363 + 1) X (.0054 + 1)
(1/5)] - 1) X 100 = 2.50

*Note: Average yield and growth percentages are calculated in the same manner.

Exhibit C (APPENDIX II)

Comparative Performance Measurement Computations

Total Percent Appreciation

$$\left(\left(\frac{\text{1978 Unit Value}}{\text{1973 Unit Value}}\right) - 1\right) \times 100$$

$$\left(\left(\frac{95.53}{104.26}\right) - 1\right) \times 100 = 8.37$$

Corresponding Annual Geometric Average Growth Rate Percentage

$$\left(\left(\left(\frac{\text{1978 Unit Value}}{\text{1973 Unit Value}}\right) \uparrow (1/5)\right) - 1\right) \times 100$$

$$\left(\left(\left(\frac{95.53}{104.26}\right) \uparrow (1/5)\right) - 1\right) \times 100 = 1.73\%$$

Total Percent Appreciation with Income Reinvested

$$\frac{\text{(1974 Income)}}{\text{Average of 1973 and 1974 Unit Values}} = \text{Units Purchased with 1974 Income}$$

$$\frac{3.50}{(104.26 + 86.00)} = .03679 \text{ Units}$$

$$\frac{\text{(1 + Units Purchased with 1974 Income) X 1975 Income Per Unit}}{\text{Average of 1974 and 1975 Unit Values}} = \text{Units Purchased with 1975 Income}$$

$$\frac{(1 + .03679) \times 3.71}{86.00 + 95.19)/2} = .04246$$

Exhibit C (APPENDIX II)--Continued

$$\frac{1 + \text{Units Purchased with 1974 + 1975 Income) X 1976 Income Per Unit}}{\text{Average of 1975 and 1976 Unit Values}} = \text{Units Purchased with 1976 Income}$$

$$\frac{(1 + .03679 + .04246) \text{ X } 3.88}{95.19 + 104.28)/2} = .04199 \text{ Units}$$

$$\frac{1 + \text{Units Purchased with 1974 + 1975 + 1976 Income) X 1977 Income Per Unit}}{\text{Average of 1976 and 1977 Unit Values}} = \text{Units purchased with 1977 Income}$$

$$\frac{(1 + .03679 + .04246 + .04199) \text{ X } 4.36}{(104.28 + 100.48) \quad /2} = .04775 \text{ Units}$$

$$\frac{(1 + \text{Units Purchased with 1974 + 1975 + 1976 + 1977 Income) X Income Per Unit}}{\text{Average of 1977 and 1978 Unit Value}} = \text{Units Purchased with 1978 Income}$$

$$\frac{(1 + .03679 + .04246 + .04199 + .04775) \text{ X } 4.91}{(100.48 + 95.53) \quad /2} = .05875 \text{ Units}$$

$$\left[\frac{(1 + \text{Units Purchased with 1974 + 1975 + 1976 + 1977 + 1978 Income) X 1978 Unit Value}}{\text{Unit Value for 1973}} - 1\right] \text{X } 100 =$$

$$\frac{(1 + .03679 + .04246 + .04199 + .04775 + .05858) \text{ X } 95.53}{104.26} - 1 \text{ X } 100 = 12.48 \text{ Appreciation with Income Reinvested}$$

Appreciation with Income Reinvested

. Corresponding Annual Geometric Growth Rate

$$\left[\left[\frac{(1 + \text{Total of Income Units Purchased from 1974 thru 1978) X 1978 Unit Value}}{\text{1972 Unit Value}}\right] \uparrow (1/5) - 1\right] \text{X } 100$$

$$\left[\left[\frac{(1 + .3679 + .04246 + .04199 + .04775 + .05857) \text{ X } 100.48}{104.26}\right] \uparrow (1/5) - 1\right] \text{X } 100 = 2.38\%$$

Corresponding Average ROR (AV T/R)